UNITED STATES DEPARTMENT of AGRICULTURE

INVENTORY of POTENTIAL and EXISTING UPSTREAM RESERVOIR SITES

TAUNTON & NARRAGANSETT BAY STUDY AREAS

U.S. DEPARTMENT of AGRICULTURE
Soil Conservation Service
Economic Research Service
Forest Service

In cooperation with the

MASSACHUSETTS WATER RESOURCES COMMISSION

JANUARY 1974

FOREWORD

The United States Department of Agriculture, in cooperation with the Massachusetts Water Resources Commission, is participating in the five-year Massachusetts Water Resources Study of the water and related land resources of the Commonwealth. One phase of this study is the inventorying of potential and existing upstream reservoir sites.

The Commonwealth of Massachusetts, through the Water Resources Commission, provides guidance and a significant financial contribution toward this phase of the Massachusetts Water Resources Study. The Massachusetts Water Resources Commission, to fulfill its responsibilities under Chapter 620, Acts of 1956 and Chapter 767, Acts of 1970, requires technical and engineering data and information on potential upstream reservoir sites. The Department of Agriculture is participating in this study under the provisions of Section 6 of the Watershed Protection and Flood Prevention Act (Public Law 566, 83rd Congress, as amended) which authorizes the Secretary of Agriculture to cooperate with other federal, state and local agencies, in surveys and investigations of the watersheds of rivers and other waterways as a basis for the development of coordinated programs.

This report, prepared by the Soil Conservation Service and submitted by the USDA Field Advisory Committee to the Water Resources Commission, identifies and inventories potential and existing upstream reservoir sites within the Taunton and Narragansett Bay Study Areas. The identification of potential Public Law 566 projects was not a purpose of this study. No attempt was made to locate or evaluate possible PL 566 watersheds.

The Massachusetts Water Resources Commission will use this report, together with other reports and studies prepared by the United States Department of Agriculture and others, in the preparation of a comprehensive plan for the Commonwealth's water and land resources.

The information and data contained herein will also assist local, state and federal agencies in their specific planning activities for the coordinated and orderly conservation, development, utilization and management of the water and land resources to meet rapidly expanding needs.

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Massachusetts Department of Public Works

Soil Conservation Service personnel prepared this report. Lloyd French, Clifford Jones, John Raleigh III, and Richard Vieira developed the basic data under the direction of Walter Bolles. Donald Mills and Patricia Brinkman investigated geological conditions. James Wesoloski was responsible for editing and publication.

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BROCKTON
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BERKLEY
BRISTOL
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DIGHTON
SEEK-ONK
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SWANSEA
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NEW BED-FORD
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0 5 10 15 Miles

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STUDY AREA BOUNDARY

SUB-WATERSHED BOUNDARY

LOCATION of SUB-WATERSHEDS TAUNTON & NARRAGANSETT BAY STUDY AREAS

MASSACHUSETTS

USDA-SCS-HYATTSVILLE MD. 1973

INVENTORY OF

POTENTIAL AND EXISTING UPSTREAM RESERVOIR SITES

in the

TAUNTON and NARRAGANSETT BAY STUDY AREAS

prepared by the

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

in cooperation with the

MASSACHUSETTS WATER RESOURCES COMMISSION

INTRODUCTION

This report presents data on 81 potential and 160 existing reservoirs in the Taunton and Narragansett Bay Study Areas in Bristol, Norfolk, and Plymouth Counties, Massachusetts.

DESCRIPTION OF STUDY AREAS

The Taunton Study Area is located in Bristol, Norfolk, and Plymouth Counties in southeastern Massachusetts. The main rivers in the study area include the Assonet, Canoe, Cedar Swamp, Cotley, Forge, Nemasket, Matfield, Mill, Rumford, Salisbury Plain, Satucket, Segreganset, Shumatuscacant, Taunton, Threemile, Town, Wading, and Winnetuxet Rivers. The Study Area, which covers about 333,000 acres or 521 square miles, is divided into twelve subwatersheds. Portions of 32 cities and towns are located within the Study Area.

The Narragansett Bay Study Area, located in Bristol and Norfolk Counties, borders on the Massachusetts - Rhode Island state line. The main rivers in the Study Area include the Bungay, Cole, Palmer, Quequechan, Sevenmile and Ten Mile Rivers. The Study Area, which covers about 114,000 acres or 178 square miles, is divided into four subwatersheds.

CRITERIA

Potential Reservoir Sites

The primary considerations used to identify potential reservoir sites were: suitable topography for a dam and reservoir, sufficient drainage area to maintain the proposed reservoir and a relatively undeveloped pool area.

The following criteria were used as a guide in site selection:

1. Drainage area -- larger than one-half square mile, but not greater than 50 square miles.

2. Ratio of drainage area to beneficial pool area -- not less than 10 to 1.

3. Minimum beneficial pool depth -- 7 feet at the dam.

4. Minimum beneficial pool area -- 10 acres.

5. Minimum beneficial pool capacity -- 100 acre-feet.

6. Maximum beneficial pool capacity -- storage volume equal to 25 inches of runoff from the drainage area.

7. Maximum height of dam -- 100 feet.

8. Pool area relatively undeveloped -- no housing developments, industrial areas, or major highways inundated.

Existing Reservoirs

Existing reservoirs were located using the U.S. Geological Survey (USGS) quadrangle sheets. Two criteria were used to determine sites to be included in this report:

1. Surface area -- at least 10 surface acres or a pond identified by name on the USGS topographic map.

2. Man-made dam -- natural ponds and beaver dams are excluded.

INVESTIGATIONS AND ANALYSES

Potential Reservoir Sites

Sites were located using the latest available USGS 7½ minute quadrangle sheets. Natural basins, or topography favorable for storage of water, and an economical location for an embankment were the primary considerations in the initial site selection. Watershed boundaries were delineated on the quadrangle sheets and the drainage area was determined for each initial site selected. Water storage areas and volumes available upstream of the site centerline were calculated. Data were also obtained to calculate the volume of earth fill required for the dam and any supplementary dikes that might be needed to maintain a reservoir.

At each site a field reconnaissance was made that included an inventory of land and facilities (man-made structures) that would be affected if a dam and reservoir were developed at the site. If it was determined that the reservoir would flood extensive made-made facilities; or a study of the elevation-area-storage data showed that the site did not meet criteria for the study, the site was dropped from further consideration.

A surficial geologic investigation was made of each potential site to determine any obvious geologic conditions that might affect the waterholding capability or require extensive foundation preparation. A preliminary geological report was prepared which outlined the types of materials that might be expected at the site and their effect on construction costs and waterholding capabilities for the site. The report of geologic conditions was based on the geologist's interpretation following the surficial investigation of the site and surrounding area. No borings were made and subsurface conditions may vary from those indicated in this report.

Hydrologic and hydraulic data were calculated using methods developed by the Soil Conservation Service. Rainfall data were obtained from Technical Papers 40 and 49, U.S. Department of Commerce, Weather Bureau. Preliminary design calculations for several levels of development for each site were processed by electronic computer, using a program which determines the most economical type of principal spillway; determines the runoff and peak flow for the 100-year frequency, 10-day duration principal spillway design storm; routes the design storm to set the emergency spillway crest; performs other routings to determine the design high water and top of dam elevations; calculates embankment yardage and other construction quantities; determines the total estimated cost of the reservoir; and calculates "safe yield" for water supply purposes.

Existing Reservoirs

An inventory was made of 160 existing reservoirs that cover at least ten acres or are identified by name on the USGS quadrangle sheet, and are formed by a man-made dam. The reservoirs were located using the USGS quadrangle sheets. An engineer made a field reconnaissance to determine the physical condition of each structure and to assess the potential for expansion of the reservoir. While at the site, photographs were taken. Selected photographs are included in this report. Ownership and use information for the reservoirs was obtained from records of the Massachusetts Department of Public Works, the Massachusetts Water Resources Commission and from local interviews.

COSTS

Preliminary cost estimates for potential reservoir sites were based on construction costs and land values as of 1972. The cost estimates include: (1) construction costs; (2) contingencies; (3) engineering and administrative services necessary for surveys, geology, final design, and construction inspection; (4) cost for land required for the reservoir and construction of the dam and spillway; and (5) costs associated with the purchase or relocation of man-made facilities affected by the constructed reservoir.

Construction costs were based on recent dam construction contract costs in Massachusetts. A factor for contingencies, equal to 15% to 35% of the construction cost, was included to account for items that were not considered at this intensity of study. Engineering and administrative services ranged from 20% to 40% of the construction cost.

Costs for land acquisition were based on an evaluation of current real estate transactions and market conditions. Land with potential for development was valued at from $1,000 to $10,000 per acre; land with little development potential was valued at from $200 to $500 per acre. Land values also varied from site to site based on the proximity to developed areas and highways; development taking place in the area; and suitability for development. Land needed for the dam, spillway and design high water pool was included in the land acquisition cost.

Cost estimates are presented on the basis of a cost per acre-foot of storage and cost per surface-acre to provide a comparison between different sites and different levels of development at the same site. Costs are based on preliminary estimates; firm cost estimates for any site can be determined only after completion of detailed geologic and engineering investigations, final structural designs, and land appraisals.

No cost estimates are included for existing reservoirs.

REPORT FORMAT

The report is divided into sections based on the sixteen subwatersheds in the Taunton and Narragansett Bay Study Areas. The location map, placed after the Table of Contents, outlines the area covered by each subwatershed. To aid local residents in determining which sites are located in their city or town, the Municipal Index of Sites lists the site identification numbers for potential and existing reservoir sites within each municipality and the page number of this report on which data are recorded.

Each subwatershed section provides Site Data for the potential and existing reservoir sites, located within the subwatershed, which are included in this report.

Potential Reservoir Sites

These site data include a Location paragraph which contains a narrative description of the location of the site by reference to nearby roads, railroads, or other physical landmarks. In addition, the latitude, longitude, and USGS quadrangle sheet name are provided for more accurate location.

Man-made facilities that would be flooded by a reservoir at the potential site are presented in the Facilities Affected paragraph. The elevation of existing facilities was estimated during the engineer's field reconnaissance with the aid of the USGS quadrangle sheets.

A summary of the preliminary geologic report is contained in the Geologic Conditions paragraph. The material in the abutments (the valley sides) and the foundation (the valley floor) is described. An estimate is made of the depth to bedrock and the probable type of rock. The availability of fill material which would be used in the dam construction is noted.

Possible leakage problems are indicated and the waterholding capability of the site is subjectively described as "good," "fair," or "poor." The waterholding capability statement is based on the geologist's interpretation of the surficial conditions he has observed during the field reconnaissance.

Engineering Notes provide information which should be helpful in preliminary design of a dam. One of the abutments is recommended as the location for an excavated emergency spillway. The excavated spillway might be in earth or rock cut -- depending upon the depth to bedrock in the abutment. If an excavated emergency spillway is unable to carry the required flows at safe velocity, the need for a concrete emergency spillway is noted. If waterholding capability can be significantly improved with a practical cutoff through pervious abutment or foundation material, this fact is also noted.

When it is known that some portion of a reservoir site is located on land owned by a governmental or quasi-public unit, the information is presented in a Public Ownership paragraph.

Sites which meet study criteria have been analyzed using a computer program which develops preliminary structure designs for several levels of beneficial pool. Results of the computer program are presented in the tables entitled Summary Data for Potential Upstream Reservoir Sites at the end of each subwatershed section. Two information lines contain data on site drainage area, USGS quadrangle name on which the site is located, latitude and longitude of the site, site rating, stream water quality, and principal spillway design storm runoff and peak flow. The site rating is based on geologic conditions and the expected waterholding capability. Sites are given one of the following ratings:

1. Suitability for deep permanent storage (over 10 feet in depth).
2. Best suited for shallow water storage (3 to 5 foot maximum depth).
3. Best suited for temporary storage (e.g., floodwater and sediment storage).

In order to furnish the most data for each potential reservoir site, each site was considered to be suitable for deep permanent storage (rating "1") for purposes of design and analyses. The rating for any site could change based on detailed geologic investigations.

Stream water quality ratings are based on classifications assigned by the Division of Water Pollution Control, Massachusetts Water Resources Commission, and published in Water Quality Standard, June 1967 and are as follows:

"Class A -- Waters designated for use as public water supply in accordance with Chapter 111 of the General Laws. Character uniformly excellent.

"Class B -- Suitable for bathing and recreational purpose including water contact sports. Acceptable for public water supply with appropriate treatment.
Suitable for agricultural, and certain industrial cooling and process uses; excellent fish and wildlife habitat; excellent aesthetic value.

"Class C -- Suitable for recreational boating; habitat for wildlife and common food and game fishes indigenous to the region; certain industrial cooling and process uses; under some conditions acceptable for public water supply with appropriate treatment. Suitable for irrigation of crops used for consumption after cooking. Good aesthetic value.

"Class D -- Suitable for aesthetic enjoyment, power, navigation, and certain industrial cooling and process uses. Class "D" waters will be assigned only where a higher water use class cannot be attained after all appropriate waste treatment methods are utilized."

The Summary Data for Potential Upstream Reservoir Sites tables also contain data for as many as six possible levels of development at each site. Elevations of the beneficial pool, emergency spillway crest, design high water, and top of dam are shown along with pertinent storage volumes, surface areas and depths. Total cost expressed in dollars per acre-foot of storage and dollars per surface-acre are provided to aid in comparision of levels of development. The emergency spillway type which was used in the preliminary design is indicated by an emergency spillway type code explained in the table notes.

These tables are photo-reductions of the computer output sheets. Elevations are shown to the tenth of a foot and costs to the nearest $10, but are not to be considered that accurate because of the limited investigations made with preliminary data. All the Summary Data Tables are based on preliminary reconnaissance-type investigations and computer-produced structure designs. Additional detailed engineering, geologic and design investigations must be made before final site selection, land acquisition and final design would be practical.

Estimated safe yield for each potential reservoir are also shown on the tables and were based on information extrapolated from data developed by Professor G. R. Higgins, Civil Engineering Department, University of Massachusetts. These estimated safe yields are based on a 95% chance, or the minimum yield that could be expected 19 years out of 20 -- taking into consideration reservoir storage-volume and expected runoff. These data do not consider evaporation, seepage, or prior upstream usage losses.

The Committee on Rainfall and Yield of Drainage Areas of the New England Water Works Association has recommended a figure of 600,000 gallons per day per square mile as a maximum economically feasible safe yield. Data for some of the potential sites in this report show a safe yield above 600,000 gallons per square mile per day: these higher values are useful to define the upper portion of a discharge-storage curve for preliminary analysis. For detailed evaluation of a potential site or water supply purposes, the recommendation of the New England Water Works Association should be considered.

Existing Reservoirs

Site data for existing reservoir sites are presented in a different format from the potential reservoir site data:

Location of the dam is indicated by reference to nearby roads, railroads, or other physical landmarks. The appropriate USGS quadrangle sheet, latitude, and longitude are provided for more accurate location.

Physical data (surface area, height of dam, and drainage area) were estimated from the quadrangle sheet and by field reconnaissance.

Potential for Expansion of the existing reservoir is estimated and any major man-made facilities which would be affected by an enlarged reservoir are noted. Many of the site narratives contain the phrase "Significant expansion does not appear practical." The phrase is used to indicate that although the pool level might be raised by a few feet or the pool area increased by a few acres, any greater expansion does not appear feasible due to topography or facilities which would be flooded.

Expansion potential for the multitude of cranberry bog reservoirs is not significant. The reservoirs are usually characterized by relatively shallow water depth (3 to 5 feet); long, low embankments which usually extend to more than one side of the pond; lack of controlled compaction during construction; and trees and brush growing on the dam. Many of the reservoirs could be raised by a few feet if the dams were raised and the outlet structures modified. In most cases, the increase in surface area would be insignificant.

In some instances, the drainage area of the reservoir does not meet the criteria requiring a 10 to 1 drainage area to pool area ratio, below which there may be relatively high evaporation losses. An increase in reservoir surface area might increase evaporation losses to a point where the reservoir could not be maintained during the summer months. These situations are indicated by the statement "The small drainage area limits expansion potential."

A description of the dam and spillway system in included in the Remarks paragraph. Construction materials, spillway type and size, and condition of the structures are noted.

Ownership and Use of the reservoir is indicated, if available. In some cases, the pool is not maintained for a specific purpose but may have incidental use for recreation. This is probably the situation for existing reservoirs which are indicated in Massachusetts Department of Public Works records as being used to "store water." Typical of these sites are old mill dams which are no longer utilized for mill power.

Some existing reservoirs that did not meet the study criteria (10 acre minimum surface area and a man-made dam) have been included in the report to present the information that may have been obtained.

MAPS

Individual subwatershed maps appear at the end of each section which indicate the location of the potential and existing reservoir sites in that subwatershed. The maps are reductions of mosaics prepared from 7½ minute USGS quadrangle sheets (1" = 2000' scale). The quadrangle sheets used and published dates are listed on the maps. Potential sites that met study criteria and which have information in the tables are indicated with a red rectangle surroudning the site number. Existing reservoirs are identified by a red circle surrounding the site number.

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-47, Town River

The Town River subwatershed covers about 37,900 acres in the municipalities of Sharon and Stoughton, in Norfolk County; Easton, Norton, Raynham and Taunton, in Bristol County; and Bridgewater, Brockton, and West Bridgewater in Plymouth County. There is a USGS stream gaging station on Dorchester Brook in Brockton, Massachusetts.

The Town River flows generally northeasterly from Lake Nippenicket in Bridgewater through West Bridgewater. Major tributaries to the Town River are the Hockomock River, Black Brook, and West Meadow Brook. The headwaters of the Hockomock River are Queset Brook which originates in Stoughton and flows southerly through Easton and Coweeset Brook which flows southerly through Easton and Brockton. These two brooks join in West Bridgewater and continue to flow southerly as the Hockomock River to its confluence with the Town River in Hockomock Swamp, Bridgewater. Black Brook originates in Easton and flows southeasterly to Hockomock Swamp. West Meadow Brook originates in Brockton and flows southerly through West Bridgewater to its confluence with the Town River. Elevations range from 431 feet on Rattlesnake Hill in Stoughton to about 40 feet in West Bridgewater. Geology of the subwatershed is characterized by granite or schist bedrock overlain by from 5 to 40 feet of englacial drift or outwash sand and gravel.

Five potential reservoir sites and 14 existing reservoirs were studied.

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POTENTIAL SITE TA-4701

Location: On an unnamed tributary to Queset Brook about 4,600 feet downstream from the Bristol - Norfolk county line in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'22" Longitude: 70°07'10"

Facilities Affected:

Facility	Elevation
2 houses	195
3 houses	190
Shed	190
Lincoln Street	190
2 garages	190
Garage	185

Geologic Conditions: Both abutments are thin discontinuous deposits of englacial drift underlain by granite bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

POTENTIAL SITE TA-4701 (continued)

Engineering Notes: This site is at the original outlet to Flyaway Pond. The dam, which is now breached, maintained a 46 acre pool area at elevation 188. The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock.

Public Ownership: Land owned by the Easton Conservation Commission abuts the dam site.

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POTENTIAL SITE TA-4702

Location: On Dorchester Brook about 1100 feet upstream from Elm Street in north Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'46" Longitude: 71°04'45"

Facilities Affected:

Facility	Elevation
2 houses	155
Shed	155
Commercial building	155
2 houses	150
Garage	150
Barn	150
Power line poles	150

Geologic Conditions: Both abutments are coarse gravel, with many cobbles and boulders, underlain by granitic gneiss bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Waterholding capabilities appear to be fair to good. Borrow material for dam construction was located near the site.

Engineering Notes: Waterholding capabilities might be improved by a cut-off to bedrock. An auxiliary dike will be needed above elevation 155. The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-4704

Location: On Black Brook about 2,200 feet upstream from Depot Street in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°02'08" Longitude: 71°07'05"

Facilities Affected:

Facility	Elevation
4 houses	145
Summer Street	145

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to schist bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

****

POTENTIAL SITE TA-4705

Location: On Queset Brook about 600 feet upstream from West Street in Stoughton, Mass. The site is within the pool area of Ames Long Pond.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'16" Longitude: 71°07'05"

Facilities Affected:

Facility	Elevation
7 houses	190
Shed	190
Plain Street	190
3 houses	185
Shed	185
Pumping Station	185
West Street	185
House	180
Shed	180
Ames Long Pond	170

Geologic Conditions: Both abutments are granite bedrock with thin discontinuous deposits of englacial drift. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was not located near the site.

POTENTIAL SITE TA-4705 (continued)

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would be excavated in bedrock. See Existing Site TA-4707 for data on Ames Long Pond.

Public Ownership: The Stoughton Water Department owns 70 acres in the pool area.

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POTENTIAL SITE TA-4706

Location: On West Meadow Brook about 300 feet upstream of Spring Street in West Bridgewater, Mass. There is an existing reservoir at this site.

Brockton, Mass. USGS quadrangle

Latitude: 42°02'03" Longitude: 71°02'12"

Facilities Affected:

Facility	Elevation
10 houses	100
2 sheds	100
Walnut Street	100
10 houses	95
1 commercial building	95
4 garages	95
1 swimming pool	95
Timber pole power lines	90

Geologic Conditions: Both abutments are englacial drift; silty sand or poorly graded sand with cobbles and boulders. Depth to schist bedrock in the foundation is estimated to be from 25 to 30 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 95. See Existing Site TA-4706 for data on the present dam and reservoir at this site.

Public Ownership: The dam site and the majority of the potential pool area are owned by the Massachusetts Department of Natural Resources.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- TOWN RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-4701 DA= 1.20 SQ MI = 768 AC USGS QUAD- BROCKTON LATITUDE 42-04-22 LONGITUDE 71-07-10																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 217 CFS																
177.6	0	0.0		9		1.6	186.6 E	266	4.1	710	189.1	62	190.8	15	6	*****
182.3	100	1.6	1780	30	5920	6.4	184.8 E	195	3.0	910	187.3	45	188.7	13	3	0.16
186.0	231	3.5	1140	41	6420	10.0	188.5 E	358	5.6	740	190.8	79	192.3	16	8	0.31
188.8	362	5.6	1060	57	6730	12.8	191.3 E	547	8.5	700	193.5	96	195.3	19	16	0.42
192.3	624	9.7	1070	88	7570	16.2	194.8 E	873	13.6	760	197.1	119	199.6	24	53	0.62
192.5	642	10.0	1060	89	7650	16.5	195.0 E	895	14.0	760	197.3	120	199.8	24	56	0.62
SITE- TA-4702 DA= 3.34 SQ MI = 2138 AC USGS QUAD- BROCKTON LATITUDE 42-04-46 LONGITUDE 71-04-45																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 767 CFS																
142.2	0	0.0		21		2.2	152.6 E	739	4.1	730	156.2	139	159.5	19	21	*****
145.1	100	0.6	4540	48	9500	5.1	147.6 E	274	1.5	1660	154.5	126	159.5	19	20	0.18
147.7	251	1.4	2190	72	7640	7.6	150.2 E	485	2.7	1130	155.8	136	160.0	20	23	0.42
149.5	402	2.3	1560	89	7010	9.5	152.0 E	675	3.8	930	156.6	142	159.8	20	22	0.61
151.1	553	3.0	1340	102	7290	11.1	153.6 E	855	4.8	870	157.2	147	159.8	20	22	0.77
SITE- TA-4704 DA= 1.21 SQ MI = 774 AC USGS QUAD- BROCKTON LATITUDE 42-02-08 LONGITUDE 71-07-05																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 284 CFS																
135.1	0	0.0		6		3.0	144.3 E	268	4.1	2340	146.6	116	148.8	17	24	*****
142.5	139	2.2	5970	53	15710	10.5	145.0 E	332	5.1	2510	147.5	129	149.7	18	27	0.21

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER — SUBWATERSHED- TOWN RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-4705 DA= 1.93 SQ MI = 1235 AC USGS QUAD- BROCKTON LATITUDE 42-05-16 LONGITUDE 71-07-05																
SITE RATING (1) STREAM WATER QUALITY (8) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 696 CFS																
172.5	0	0.0		11		2.5	182.3 E	427	4.1	2300	186.6	144	191.5	22	37	*****
177.2	100	1.0	10850	31	34490	7.1	177.2 N	115	1.1	9400	187.3	153	193.3	23	44	0.18
179.3	186	1.7	5730	53	20030	9.3	181.8 E	373	3.5	2860	187.2	152	191.8	22	38	0.30
181.8	359	3.5	3370	86	14090	11.8	184.3 E	628	6.1	1920	188.7	170	193.2	23	43	0.49
184.3	618	6.0	2220	117	11740	14.2	186.8 E	965	9.3	1420	190.3	190	194.7	25	49	0.71
SITE- TA-4706 DA= 4.98 SQ MI = 3187 AC USGS QUAD- BROCKTON LATITUDE 42-02-03 LONGITUDE 71-02-12																
SITE RATING (1) STREAM WATER QUALITY (8) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.10 IN, PEAK FLOW = 1134 CFS																
82.5	0	0.0		31		2.5	92.1 E	1649	6.1	720	94.6	359	99.1	19	113	*****
84.3	100	0.4	12800	80	15950	4.3	92.8 E	1809	6.8	710	95.1	370	100.1	20	127	0.20
87.4	482	1.7	3170	165	9250	7.3	93.9 E	2162	8.1	710	96.3	399	101.5	21	150	0.77
90.9	1245	4.6	1470	261	7030	10.8	95.4 E	2720	10.2	670	97.8	439	101.8	22	156	1.56
94.6	2390	9.0	930	357	6220	14.6	97.1 E	3407	12.8	650	99.6	486	102.3	22	164	2.43

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-4706

Location: On West Meadow Brook at Spring Street in West Bridgewater, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°02'03" Longitude: 71°02'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	8	3200	5.0

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-4706 for details.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped on the left side. The right side of the dam was built lower and serves as an emergency spillway. The principal spillway is a concrete drop inlet with flashboards and a corrugated metal pipe conduit. The dam is in good condition.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used as a wildlife refuge.

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EXISTING SITE TA-4707 (Ames Long Pond)

Location: On Queset Brook about 950 feet downstream from the Norfolk - Bristol County line in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'44" Longitude: 71°06'55"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
75	14	1700	2.6

Potential for Expansion: Significant expansion does not appear practical. A 3,000 foot long dam would be needed and many roads and cottages would be flooded by expansion which would not significantly increase the surface area of the reservoir.

Remarks: The dam is an earth fill structure. The upstream slope is riprapped. The spillway is a concrete weir with flashboards that outlets into a channel which follows the toe of the dam slope about 1,000 feet before reaching the stream. There is some erosion along the top of the dam and trees are growing on both slopes.

Ownership and Use: The site is owned by the Town of Easton, Massachusetts and is used primarily for recreation.

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EXISTING SITE TA-4708 (Shovelshop Pond)

Location: On Queset Brook about 500 feet upstream from Longwater Pond and Main Street in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'07" Longitude: 71°05'59"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	10	3300	5.2

Potential for Expansion: Significant expansion does not appear practical. The pond is surrounded by roads and houses and railroads which would be affected.

Remarks: The dam is comprised of two earth fill structures which tie into a hill in the center. The downstream slope of the south section is faced with stone. There are two spillways. One is a multi-bay concrete drop structure with one bay equipped with flashboards. The other spillway is a stone box culvert with a wooden gate for water control. The dam has trees growing on it. The drop structure has been undermined in some areas and concrete is spalling.

Ownership and Use: The site is owned by the Town of Easton and is drained.

****

EXISTING SITE TA-4709 (Longwater Pond)

Location: On Queset Brook at Main Street in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°03'58" Longitude: 71°05'44"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	9	5350	8.4

Potential for Expansion: Significant expansion does not appear practical. Topography limits any significant increase in the surface area of the reservoir.

Remarks: The dam is an earth fill structure with Main Street across the top. Both slopes are faced with stone. The spillway is a two bay drop structure equipped with flashboards. Concrete in the drop structure is cracked and spalled and there is a considerable amount of leakage around the flashboards.

Ownership and Use: The site is owned by O.F. Ames. The pond is controlled by the Easton, Massachusetts Highway Department and is used for water storage.

****

EXISTING SITE TA-4710 (Morse Pond)

Location: On Queset Brook about 100 feet upstream from Central Street, Route 123, in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°02'49" Longitude: 71°04'59"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
25	9	6700	10.5

Potential for Expansion: Significant expansion does not appear practical. Two state highways and many houses would be affected by an expanded reservoir.

Remarks: The dam is an earth fill structure with concrete drop structure spillways on each end. The spillways are equipped with flashboards. The earth fill portion has large trees growing on it and a downstream facing-wall is in poor condition. Concrete in the spillway is cracked and spalled.

Ownership and Use: The site is owned by F. Moms and is used for water storage.

****

EXISTING SITE TA-4711 (Dean Pond)

Location: On Queset Brook about 500 feet downstream of Route 138 near Easton Green in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°02'35" Longitude: 71°04'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
1*	9	6800	10.6

Potential for Expansion: Significant expansion does not appear practical. Route 138 and Morse Pond located about 2,000 feet upstream limit expansion above the original four acre site.

Remarks: The dam is an earth fill structure. There are two spillways. A small concrete and wood structure has deteriorated and is no longer operable causing the pond to be drawn-down. The other spillway is a concrete drop structure equipped with flashboards which outlets into a concrete-lined channel. There are trees growing on the dam. Concrete slabs in the outlet channel are toppled or leaning.

Ownership and Use: The site is owned by J.O. Dean and is presently drained.

* The original pool area was 4 acres.

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EXISTING SITE TA-4712 (French Pond)

Location: On Dorchester Brook at Union Street in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'14" Longitude: 71°04'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
12	9	1300	2.0

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments.

Remarks: The dam is an earth fill structure with Union Street across the top. The upstream slope is partially riprapped. The principal spillway is a concrete drop-inlet equipped with stop logs, and a corrugated metal pipe and stone box culvert under Union Street. The secondary spillway, a concrete drop structure with flashboards, outlets on the west end of the dam. Large trees grow on both slopes of the dam. Seepage occurs under one section of the embankment.

Ownership and Use: The site is owned by Mrs. Woodland and water rights are owned by William T. Knapp. Use of the site is not known.

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EXISTING SITE TA-4713 (Monte Pond)

Location: On Dorchester Brook about 50 feet upstream from Elm Street in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'37" Longitude: 71°04'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	15	2300	3.6

Potential for Expansion: Significant expansion does not appear practical. Site TA-4702, located about 1,000 feet upstream, appears to be a more suitable site for an expanded reservoir in this area.

Remarks: The dam is an earth fill structure. Both slopes are faced with stone. There appears to be no principal spillway through the embankment although water pours from under the dam along an old channel. The emergency spillway is a vegetated channel at the east end of the dam. There are large trees growing on the top of the dam and extensive erosion has occurred. Seepage is visible all along the downstream toe of the slope.

EXISTING SITE TA-4713 (continued)

Ownership and Use: The site is owned by O.F. Ames and is used primarily for recreation.

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EXISTING SITE TA-4714 (Bigney Pond)

Location: On Dorchester Brook at Torrey Street in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°04'10" Longitude: 71°04'23"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	8	2650	4.1

Potential for Expansion: A 50 - 75 acre pool area could be developed. A 4,000 foot long dam would be required.

Remarks: The dam is an earth fill structure with Torrey Street across the top. The spillway is a masonry drop inlet structure attached to the Torrey Street culvert.

Ownership and Use: The site is owned by Mrs. Parker and is used primarily for recreation.

****

EXISTING SITE TA-4715 (Ames Pond)

Location: On Daley Brook about 150 feet upstream of Route 123 in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°03'20" Longitude: 71°04'25"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	8	350	0.6

Potential for Expansion: Significant expansion does not appear practical. About 2,000 feet of dam and dikes would be needed to double the surface area of the reservoir.

Remarks: The dam is an earth fill structure with a concrete wall which extends the length of the dam. The spillway is a concrete and masonry chute. Seepage occurs through the dam. The concrete in the spillway chute is undermined and spalling.

Ownership and Use: The site is owned by Stonehill College and is used for water storage.

****

EXISTING SITE TA-4716 (Mill Pond)

Location: On West Meadow Brook about 150 feet upstream from Crescent Street in West Bridgewater, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°01'29" Longitude: 71°01'56"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	10	3600	5.6

Potential for Expansion: Significant expansion does not appear practical. A 6,000 foot long dike would be required.

Remarks: The dam is an earth fill structure. The upstream slope has riprap and the downstream slope is faced with stone. The principal spill way is a concrete drop structure with flashboards. A concrete capped emergency spillway is located to the right of the drop structure. There are trees growing on the top of the dam. Some seepage occurs through the earth fill.

Ownership and Use: The site is owned by Linwood Thompson and is used for water storage.

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EXISTING SITE TA-4717

(Little Cedar Swamp Pond)

Location: On an unnamed tributary to Black Brook about 2,000 feet upstream from Route 106, Foundry Street, In Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°00'52" Longitude: 71°04'46"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
95	5	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. Three spillways are used for water management of cranberry bogs. Two spillways are corrugated metal half-round risers and conduits. The other spillway is a concrete flume. Seepage was observed near the right-most spillway.

Ownership and Use: The site is owned by Morse Brothers and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-4718

Location: On the Town River about 150 feet downstream from High Street in Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°00'08" Longitude: 70°58'58"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
30	12	33,300	52.0

Potential for Expansion: Significant expansion does not appear practical. Three state highways and the Penn-Central Railroad would be affected by the expansion of the reservoir.

Remarks: The dam is a concrete gravity structure. There is a fish ladder on the left end of the dam. The spillway is two large bays separated into 6 smaller bays with flashboards in each. There are also two wooden gates which could be used to drain the pond. Some of the timber in the gates and flashboards is rotted.

Ownership and Use: The site is owned by William J. Reynolds and is used for mill purposes.

****

EXISTING SITE TA-4719 (Briggs Pond)

Location: On an unnamed tributary to Queset Brook about 50 feet upstream from Bay Road (Stoughton) in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'34" Longitude: 71°08'34"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
19	9	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. The water level of the present pond drops in the summer.

Remarks: The dam is an earth fill structure. The upstream slope is faced with concrete and the downstream slope is faced with stone. There are two spillways; a concrete flume with flashboards and another concrete flume with flashboards which outlets to a stone masonry drop. Several large trees are growing on the embankment. Concrete in one of the spillways is cracked.

Ownership and Use: The site is owned by Oakes Ames and is used to store water.

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TA-4706

Morse Pond

TA-4710

Ames Long Pond

TA-4707

Bigney Pond

TA-4714

Longwater Pond

TA-4709

EXISTING RESERVOIRS

SUBWATERSHED TA-47

TOWN RIVER

USDA-SCS-HYATTSVILLE, MD. 1973

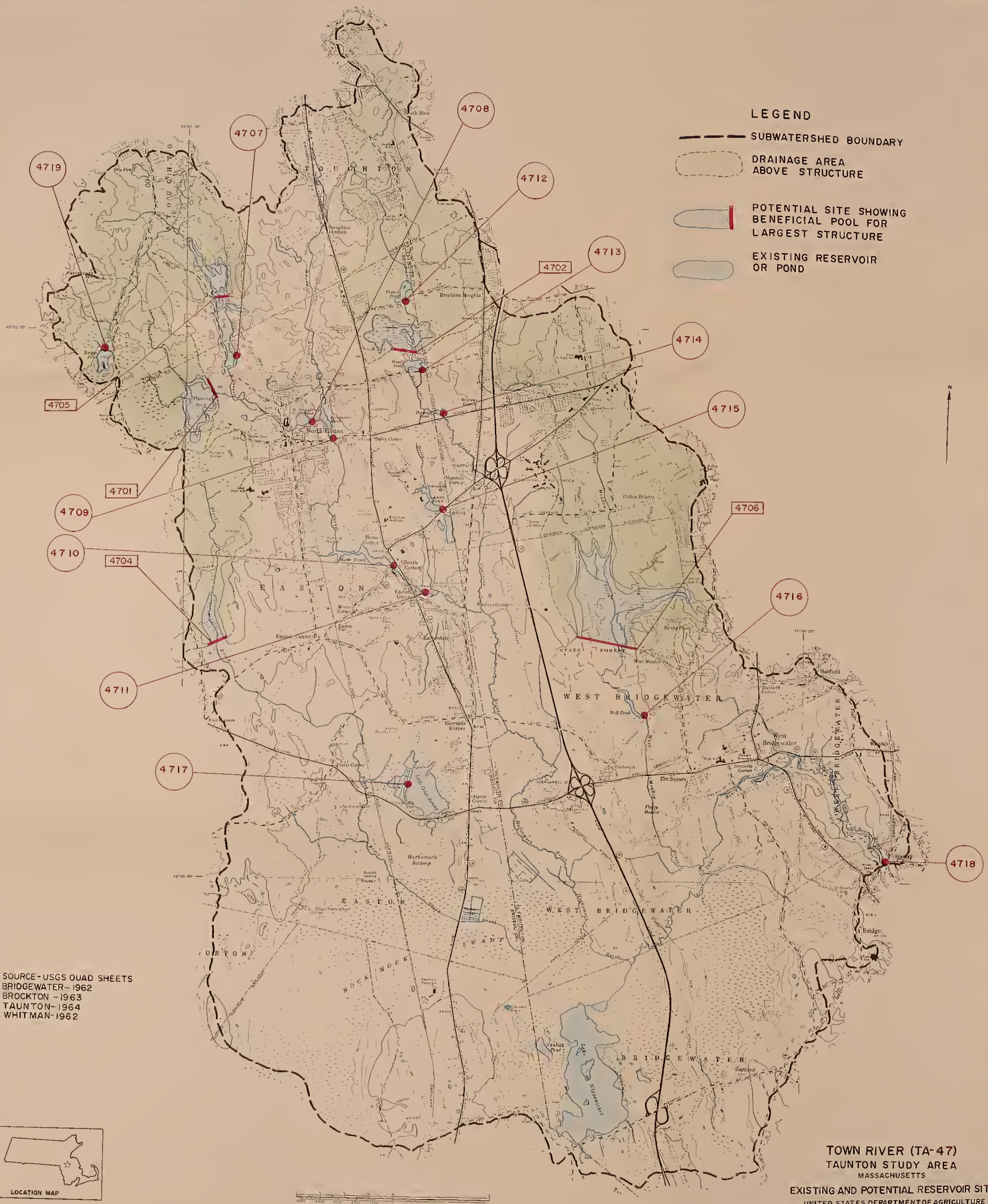
TA-4715
Ames Pond

TA-4716
Mill Pond

TA-4718

EXISTING RESERVOIRS
SUBWATERSHED TA-47
TOWN RIVER

USDA-SCS-HYATTSVILLE, MD. 1973



SOURCE - USGS QUAD. SHEETS
BRIDGEWATER - 1962
BROCKTON - 1963
TAUNTON - 1964
WHITMAN - 1962

LOCATION MAP

TOWN RIVER (TA-47)

TAUNTON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1972

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-48, Matfield River

The Matfield River subwatershed covers about 29,900 acres in the municipalities of Avon, Holbrook, Stoughton and Weymouth in Norfolk County; and Abington, Bridgewater, Brockton, East Bridgewater, West Bridgewater, and Whitman in Plymouth County.

The Matfield River originates in East Bridgewater and flows southeasterly to Bridgewater. Major tributaries are the Salisbury Plain River, Beaver Brook and Meadow Brook. Salisbury Plain River originates in Stoughton and flows southeasterly through Brockton to its confluence with the Matfield River in East Bridgewater. Beaver Brook originates in Holbrook and flows southerly through Brockton to its confluence with the Matfield River in East Bridgewater. Meadow Brook originates in Whitman and also flows southwesterly to its confluence with the Matfield River in East Bridgewater. Elevations range from a high of about 280 feet in Stoughton to a low of about 30 feet in Bridgewater. Geology of the subwatershed is characterized by granitic gneiss or schist bedrock overlain by from 10 to 20 feet of glacial till, englacial drift, or outwash sand and gravel.

Five potential reservoir sites and 14 existing reservoirs were studied.

****

POTENTIAL SITE TA-4801

Location: On Black Brook about 2,200 feet upstream from Central Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°02'37" Longitude: 70°55'20"

Facilities Affected:

Facility	Elevation
Oak Street	75
2 houses	70
1 shed	70
Aqueduct	70

Geologic Conditions: Both abutments are silty sand and gravel with many cobbles and large boulders. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be good; however, highly permeable zones may be encountered in the gravel. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

****

POTENTIAL SITE TA-4802

Location: On Beaver Brook about 400 feet upstream of the Cleveland Pond Dam in Abington, Mass. The site is within the pool area of Cleveland Pond.

Whitman, Mass. USGS quadrangle

Latitude: 42°06'53" Longitude: 70°58'47"

Facilities Affected:

Facility	Elevation
4 houses	155
Garage	155
Barn	155
3 sheds	155
Chestnut Street	155
House	150
Cleveland Pond	130

Geologic Conditions: Both abutments are thin discontinuous glacial till with many outcrops of granitic gneiss bedrock. Bedrock in the foundation appears at the surface in many places. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: Three auxiliary dikes will be needed at the site. The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock. See Existing Site TA-4802 for data on Cleveland Pond.

Public Ownership: The dam site and the majority of the potential pool area are within the Ames Norwell State Park.

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POTENTIAL SITE TA-4803

Location: On Meadow Brook about 200 feet upstream from Union Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°02'39" Longitude: 70°56'46"

POTENTIAL SITE TA-4803 (continued)

Facilities Affected:

Facility	Elevation
3 houses	85
3 garages	85
Barn	85
5 sheds	85
Pumphouse (booster station)	85
Bedford Street	85
Pine Street	85
20 houses	80
Harvard Street	80
Power line poles	80
Aqueduct	80
House	75
2 sheds	75
Cemetery	75
Power line poles	75

Geologic Conditions: The left abutment is outwash sand and gravel, but may be underlain by glacial till. The right abutment is englacial drift with many cobbles and boulders. Depth to comglomerate or schist bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be fair. There may be leakage through the left abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 85. Remains of a breached dam are located downstream of the site. This site was also identified as a potential site (Site NAR-48-2) in the North Atlantic Regional Water Resources Study.

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POTENTIAL SITE TA-4804

Location: On Beaver Brook about 450 feet upstream from Court Street in Brockton, Mass. The site is within the pool area of Hunts Pond.

Whitman, Mass. USGS quadrangle

Latitude: 42°05'42" Longitude: 70°58'32"

Facilities Affected:

Facility	Elevation
10 houses	145
Groveland Street	130
Power line poles	130

POTENTIAL SITE TA-4804 (continued)

Geologic Conditions: Both abutments are thin discontinuous deposits of glacial till underlain by granitic gneiss. There are outcrops of bedrock on the right abutment. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock. See Existing Site TA-4804 for data on Hunts Pond.

Public Ownership: Hunts Pond and the adjacent area (a total of 14 acres) are owned by the City of Brockton. Twenty acres of Ames Norwell State Park would be flooded at elevation 145.

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POTENTIAL SITE TA-4805

Location: On the Satucket River about 1,400 feet downstream from Bridge Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°01'22" Longitude: 70°56'14"

Facilities Affected:

Facility	Elevation
34 houses	50
Barn	50
16 garages and sheds	50
Crescent Street	50
Pond Street	50
35 houses	45
18 sheds	45
Dairy business	45
Poultry business	45
Restaurant	45
Bridge Street	45
Washington Street	45

Geologic Conditions: Both abutments are fine outwash sand. High on the slope of the right abutment may be thin englacial drift underlain by lacustrine silt and clay. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary design information indicates that a concrete drop-structure emergency spillway may be required at this site.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- PLAIN RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER	DAM				SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-4801	DA= 0.93 SQ MI = 595 AC		USGS QUAD- WHITMAN									LATITUDE 42-02-37 LONGITUDE 70-55-20					
SITE RATING (1)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 6.00 IN, PEAK FLOW = 319 CFS					
63.5	0	0.0		7		1.5	71.4	E	206	4.1	1730	73.8	82	76.1	14	17	*****
68.9	100	2.0	4010	30	13230	6.8	71.4	E	208	4.1	1930	73.9	83	75.8	14	17	0.16
70.4	149	3.0	3170	39	12030	8.3	72.9	E	297	6.0	1590	75.3	101	77.5	15	23	0.21
71.4	199	4.0	2720	52	10320	9.3	73.9	E	375	7.6	1440	76.1	112	78.6	17	29	0.26
72.1	248	5.0	2510	63	9890	10.2	74.6	E	451	9.1	1380	77.1	124	80.1	18	41	0.30
SITE- TA-4802	DA= 3.41 SQ MI = 2182 AC		USGS QUAD- WHITMAN									LATITUDE 42-06-53 LONGITUDE 70-58-47					
SITE RATING (1)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 6.10 IN, PEAK FLOW = 843 CFS					
132.6	0	0.0		18		2.5	144.5	E	755	4.1	660	149.8	209	155.3	25	62	*****
136.0	100	0.5	4660	41	11300	6.0	138.5	E	251	1.4	1860	147.8	172	153.5	23	52	0.18
140.8	386	2.0	1670	75	8570	10.8	140.8	N	414	2.3	1560	151.8	257	158.0	28	81	0.59
146.3	959	5.3	800	147	5270	16.2	148.8	E	1405	7.6	550	153.6	303	158.1	28	82	1.15
150.8	1819	10.0	590	233	4630	20.7	153.3	E	2503	13.7	430	156.3	373	160.0	30	100	1.78
SITE- TA-4803	DA= 5.76 SQ MI = 3686 AC		USGS QUAD- WHITMAN									LATITUDE 42-02-39 LONGITUDE 70-56-46					
SITE RATING (2)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 5.90 IN, PEAK FLOW = 1298 CFS					
69.1	0	0.0		17		5.1	78.6	E	2059	6.6	850	80.6	543	85.1	21	62	*****
71.1	100	0.3	16640	81	20640	7.1	77.6	E	1697	5.5	980	80.1	520	83.5	20	49	0.20
73.4	391	1.2	4540	186	9540	9.3	77.9	E	1764	5.6	1000	80.3	528	83.0	19	46	0.67
75.8	972	3.2	2550	302	8220	11.8	80.3	E	2857	9.3	870	82.1	647	86.4	22	73	1.35
78.1	1843	6.0	1520	419	6690	14.2	80.6	E	3097	10.1	900	83.1	702	86.1	22	70	2.12

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- PLAIN RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-4804 DA= 4.80 SQ MI = 3072 AC USGS QUAD- WHITMAN LATITUDE 42-05-42 LONGITUDE 70-58-32																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.00 IN, PEAK FLOW = 1100 CFS																
115.8	0	0.0		12		5.9	127.8 E	1062	4.1	910	132.5	304	138.7	29	108	*****
120.5	100	0.4	10630	34	3109C	10.5	120.5 N	138	0.5	7680	132.3	303	140.5	30	123	0.20
125.3	553	2.2	2210	157	777C	15.2	127.8 E	1069	4.1	1140	133.7	318	139.6	30	116	0.84
129.6	1458	5.6	1020	267	5560	19.6	132.1 E	2225	8.7	670	136.8	352	142.3	32	141	1.70
134.2	2816	11.0	630	323	549C	24.2	136.7 E	3699	14.3	480	140.6	409	145.3	35	171	2.64
SITE- TA-4805 DA= 41.24 SQ MI = 26394 AC USGS QUAD- WHITMAN LATITUDE 42-01-22 LONGITUDE 70-56-14																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.90 IN, PEAK FLOW = 2351 CFS																
40.8	100	0.0	31730	197	16140	6.8	40.8 D	430	0.2	7380	46.5	1045	49.7	16	10	0.49
42.0	459	0.2	7680	387	911C	8.1	42.0 D	789	0.4	4470	47.0	1108	49.7	16	10	0.98
42.5	649	0.3	5690	452	817C	8.5	42.5 D	979	0.4	3770	47.2	1140	49.8	16	11	1.33

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-4802 (Cleveland Pond)

Location: On Beaver Brook near the Brockton - Abington boundary in Abington, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°06'51" Longitude: 70°58'47"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
100	14	2150	3.4

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-4802 for details.

Remarks: The dam is an earth fill structure with a concrete downstream headwall. The spillway is a 6 bay concrete drop structure with each pair of bays set higher than the next. A gate valve is located to the left of the drop structure. Concrete in the headwall is cracked. There are trees growing on the dam and erosion has occurred along the upstream face. A large boil was observed downstream of the dam.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is part of Ames-Norwell State Park. The site is used for recreation.

****

EXISTING SITE TA-4804 (Hunts Pond)

Location: On Beaver Brook about 150 feet upstream from Court Street in Brockton, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°05'42" Longitude: 70°58'32"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	7	3400	5.3

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-4804 for details.

EXISTING SITE TA-4804 (continued)

Remarks: The dam is an earth fill structure. Both slopes are faced with stone. The spillway is a concrete flume with provision for the use of flashboards. The flume outlets onto a sloped concrete apron. There are many trees growing on the dam. The stone facing has fallen in many locations. Overtopping of the embankment has occurred at each end. The right end has been filled-in with stones and a log, held in place by stones, maintains the water level at the left end. Seepage under the embankment occurs in many places. The outlet apron is being undermined.

Ownership and Use: The site is owned by the City of Brockton and is planned for future use as a recreation area.

****

EXISTING SITE TA-4806 (Cushing Pond)

Location: On Beaver Brook at Chestnut Street in Abington, Mass.

Weymouth, Mass. USGS quadrangle

Latitude: 42°07'44" Longitude: 70°58'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	12	1150	1.8

Potential for Expansion: Significant expansion does not appear practical. A 3,000 foot long dam would be needed and expansion would create a pool with a large percentage of shallow water.

Remarks: The dam is an earth fill structure with Chestnut Street across the top. Both slopes are faced with stone. The spillway system is two concrete drop inlets with provision for flashboards. Flows are carried under Chestnut Street by two stone box culverts. One of the inlet structures has a hole broken through it. Trees are growing on the dam.

Ownership and Use: The site is owned by Norman Walsh and is used for water storage.

****

EXISTING SITE TA-4807
(Brockton Reservoir)

Location: On Salisbury Brook just upstream from South Street in Avon, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°06'52" Longitude: 71°02'56"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
85	15	1800	2.8

Potential for Expansion: Significant expansion does not appear practical. The reservoir is surrounded by D.W. Field Park. Expansion would affect an interchange between Routes 24 and 28.

Remarks: The dam is an earth fill structure. The upstream slope has a vertical stone wall which ties into riprap on the abutments. The spillway is a masonry chute structure with flashboards.

Ownership and Use: The site is owned by the City of Brockton and is used as a water supply reservoir.

****

EXISTING SITE TA-4808 (Waldo Lake)

Location: On Salisbury Brook about 1,000 feet downstream from the Brockton - Avon boundary and about 5,200 feet northeast of the Routes 24 and 27 interchange in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°06'19" Longitude: 71°02'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
75	16	2000	3.1

Potential for Expansion: Significant expansion does not appear practical. Brockton Reservoir, Site TA-4807, is immediately upstream of Waldo Lake.

Remarks: The dam is an earth fill structure with D.W. Field Parkway across the top. The upstream face is riprapped. A berm above the riprap provides a park area between the pond and roadway. Most of the downstream slope is riprapped. The spillway is a masonry drop structure with a stepped chute outlet. There are also two gates to drain the pond.

Ownership and Use: The site is owned by the City of Brockton, Massachusetts, and is used for recreation.

****

EXISTING SITE TA-4809

(Upper Porter Pond)

Location: On Salisbury Brook about 75 feet upstream from Oak Street in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°06'05" Longitude: 71°02'37"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	12	2100	3.3

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam. The Brockton Art Center, located on the east bank of the reservoir, would be affected.

Remarks: The dam is an earth fill structure. A portion of the downstream slope is riprapped. The spillway is a stone masonry drop structure with a stepped chute outlet. Two stone masonry culverts carry water through Oak Street. Some wave erosion has occurred on the upstream slope.

Ownership and Use: The site is owned by the City of Brockton and is used for recreation.

****

EXISTING SITE TA-4810

(Lower Porter Pond)

Location: On Salisbury Brook about 950 feet south of Oak Street in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'55" Longitude: 71°02'37"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
8	8	2150	3.4

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam. Upper Porter Pond is immediately upstream.

EXISTING SITE TA-4810 (continued)

Remarks: The dam is an earth fill structure. The spillway is a masonry drop structure with a stepped chute outlet. There is also a gate to drain the pond.

Ownership and Use: The site is owned by the City of Brockton and is used for recreation.

****

EXISTING SITE TA-4811

(Thirtyacre Pond)

Location: On Salisbury Brook about 1800 feet north of the junction of West and Pleasant Streets in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'37" Longitude: 71°02'40"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
24	9	2250	3.5

Potential for Expansion: Significant expansion does not appear practical. Upper and Lower Porter Ponds are immediately upstream. Expansion of Thirtyacre Pond would result in very little increase in total surface area.

Remarks: The dam is an earth fill structure. There are two spillways. The main spillway is a concrete drop structure with flashboards and two corrugated metal pipes which carry flow through the dam. The other spillway is a masonry drop structure with a stepped chute outlet. Seepage occurs under or through the dam and there is wave erosion on the upstream slope.

Ownership and Use: The site is owned by the City of Brockton, Massachusetts, and is used for recreation.

EXISTING SITE TA-4812
(Ellis Brett Pond)

Location: On Salisbury Brook about 1,000 feet northeast of the intersection of West and Pleasant Streets in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'27" Longitude: 71°02'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
4	8	3500	5.4

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments. Thirtyacre Pond is located immediately upstream.

Remarks: The dam is an earth fill structure. The upstream slope is partially faced with stone. The spillway is a concrete flume with flashboards. Trees are growing on the dam.

Ownership and Use: The site is owned by the City of Brockton and is used for recreation.

****

EXISTING SITE TA-4813 (Cross Pond)

Location: On Salisbury Brook at a street about 600 feet upstream of Pleasant Street in Brockton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°05'23" Longitude: 71°02'31"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
3	6	3600	5.6

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments.

Remarks: The dam is an earth fill structure with a street across the top. A concrete headwall extends along the upstream water edge. The spillway is a semi-circular concrete weir leading to a street culvert.

Ownership and Use: The site is owned by the City of Brockton, Massachusetts, and is used for recreation.

****

EXISTING SITE TA-4814 (Forge Pond)

Location: On Meadow Brook about 1,200 feet upstream from North Central Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°02'11" Longitude: 70°57'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	10	4600	7.2

Potential for Expansion: Significant expansion does not appear practical. Forge Pond is a series of 4 small ponds separated by streets and surrounded by houses.

Remarks: The dam is an earth fill structure. The spillway is a 4 bay ogee section with a fish ladder and a gate for draining the pond. The right end of the dam is low and serves as an emergency spillway section. The fish ladder is deteriorated and inoperable. The drain gate leaks. Some stones in the masonry outlet channel wall have fallen into the channel.

Ownership and Use: The site is owned by the Town of East Bridgewater, Massachusetts, and is used primarily for recreation.

****

EXISTING SITE TA-4815

Location: On the Satucket River at the junction of Plymouth and Whitman Streets in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°01'16" Longitude: 70°57'03"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	11	26,850	42.0

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for an enlarged reservoir: a large area of shallow water would be created. A mill and several other buildings would be affected.

Remarks: The dam is a concrete gravity structure. The left portion of the dam has flashboards on the concrete weir. There is a gate structure to drain the pond. Concrete on the downstream face has cracks.

Ownership and Use: The site is owned by Carver Cotton Gin Company and is used for factory fire protection.

****

EXISTING SITE TA-4816

(Captains Pond)

Location: On Beaver Brook about 500 feet upstream from Elm Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°03'08" Longitude: 70°58'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
0*	6	5300	8.3

Potential for Expansion: It appears that the dam could be rebuilt. A reconnaissance report concerning this site is on file at the Soil Conservation Service in Raynham, Massachusetts.

Remarks: The dam is an earth fill structure that has been breached.

Ownership and Use:

* Original pool area was about 60 acres.

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EXISTING SITE TA-4817 (Jones Pond)

Location: On a by-pass of Beaver Brook about 200 feet upstream from Elm Street in East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°02'54" Longitude: 70°58'07"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
2	18	52	0.1

Potential for Expansion: Significant expansion does not appear practical. Topography is not suited to a larger reservoir.

Remarks: The dam is an earth fill structure. Both slopes are faced with stone. The spillway is a stone box culvert. Water also flows over a collapsed area of the dam. Large trees are growing on the dam.

Ownership and Use: Ownership of the site is not known. An abutter is Willard Marchant. The site is used for fishing and ice skating.

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TA-4804
Hunts Pond

TA-4809
Upper Porter Pond

TA-4807
Brockton Reservoir

TA-4810
Lower Porter Pond

TA-4808
Waldo Lake

EXISTING RESERVOIRS
SUBWATERSHED TA-48
MATFIELD RIVER

USDA-SCS-HYATTSVILLE MD. 8473

TA-4811
Thirtyacre Pond

TA-4813
Cross Pond

TA-4814
Forge Pond

EXISTING RESERVOIRS
SUBWATERSHED TA-48
MATFIELD RIVER

USDA-SCS-HYATTSVILLE, MD. 1973

LEGEND

- SUBWATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING RESERVOIR OR POND

4807 4808 4806 4802 4809 4810 4811 4812 4813 4804 4816 4817 4801 4814 4803 4815 4805

SOURCE: USGS QUAD SHEETS
BROCKTON-1963
WHITMAN-1962
BLUE HILLS-1958
WEYMOUTH-1958

SALISBURY PLAIN RIVER (TA-48)

TAUNTON RIVER STUDY AREA
MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-49, Shumatuscacant River

The Shumatuscacant River subwatershed covers about 20,500 acres in the municipalities of Abington, Bridgewater, East Bridgewater, Halifax, Hanson, Pembroke, Plympton and Rockland, in Plymouth County; and Weymouth in Norfolk County. There is a USGS stream gaging station on Poor Meadow Brook in Hanson, Mass. The Shumatuscacant River originates in Abington and flows southeasterly through Whitman to Hanson, where it joins Poor Meadow Brook which flows southerly to East Bridgewater. Elevations in the subwatershed range from a high of about 220 feet in Abington to a low of about 40 feet in East Bridgewater. Geology of the subwatershed is characterized by granitic gneiss or schist bedrock overlain by from 10 to 20 feet of glacial till, englacial drift or outwash sand and gravel.

Fourteen existing reservoirs were studied. There were no potential reservoir sites that met study criteria.

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EXISTING SITE TA-4901

(Island Grove Pond)

Location: On the Shumatuscacant River at Orange Street, Route 123, in Abington, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°06'25" Longitude: 70°56'27"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
35	13	2100	3.3

Potential for Expansion: Significant expansion does not appear practical. The reservoir is surrounded by streets and houses.

Remarks: The dam is an earth fill structure with Orange Street across the top. The upstream slope is riprapped with rough concrete between the stones. A stone masonry wall covers most of the downstream slope. There are two spillways. One is a concrete drop inlet with flashboards and can be used as a pond drain. The other is a semi-circular concrete weir which outlets into 2 stone box culverts.

Ownership and Use: The site is owned by the Town of Abington, Massachusetts, and is used for recreation.

****

EXISTING SITE TA-4902 (Hobart Pond)

Location: On the Shumatuscacant River about 600 feet upstream from South Avenue, Route 27, in Whitman, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°05'03" Longitude: 70°55'34"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	8	4250	6.7

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for an enlarged reservoir; a large area of shallow water would be created.

Remarks: The dam is a crescent-shaped concrete drop structure which ties into long wing walls on a box culvert. There is some spalling at the junction of the drop structure and the wing walls.

Ownership and Use: The site is owned by the Town of Whitman, Massachusetts, and is used primarily for recreation and wildlife habitat.

****

EXISTING SITE TA-4903 (Cushing Pond)

Location: On an unnamed tributary to Meadow Brook about 3,500 feet upstream from Washington Street, Route 14, in Hanson, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°04'14" Longitude: 70°53'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10*	11	950	1.5

Potential for Expansion: It appears that a 50 acre pond could be created.

Remarks: The dam is an earth fill structure that has been breached.

Ownership and Use:

* The original surface area was about 25 acres.

****

EXISTING SITE TA-4904

Location: On an unnamed tributary to the Satucket River; the most northerly cranberry bog reservoir south of Pond Street in Halifax, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°00'17" Longitude: 70°53'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	5	360	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure which separates two cranberry bog reservoirs. There are two spillways; a concrete drop inlet with flashboards and a concrete pipe conduit controls flow into the reservoir to the south. The second outlet, a closed concrete flume with flashboards, outlets water into a canal and a cranberry bog. Both slopes of the dam are covered with brush and small trees. Concrete near the flashboard area of both spillways is spalling.

Ownership and Use: The site is owned by the United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4905

Location: On an unnamed tributary to the Satucket River just upstream from Robbins Pond in Halifax and East Bridgewater, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°00'09" Longitude: 70°54'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
145	9	8100	12.7

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for an expanded reservoir. A very long dike would be needed. Expansion would affect Route 106.

EXISTING SITE TA-4905 (continued)

Remarks: The dam is an earth fill structure which separates the reservoir from Robbins Pond. There are 3 outlets which are used for water management of cranberry bogs. Two outletting to the south are concrete closed flumes with flashboards. The other spillway is a concrete closed flume with two bays of flashboards. This spillway passes any flows not needed in the bogs. The right sidewall and headwall of the latter spillway are cracked and badly undermined. If damage is not corrected soon, the structure will be completely undermined and fail. Trees and brush are growing on the dam.

Ownership and Use: The site is owned by the United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4906

(Stump Pond-Upper)

Location: On Stump Brook about 1,500 feet upstream from Elm Street in Halifax, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°00'02" Longitude: 70°52'45"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
8	7	6800	10.6

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for an enlarged reservoir; a large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The spillway is a two bay concrete closed flume with flashboards. Trees are growing on both slopes of the dam. Erosion has occurred at the downstream slope near the spillway structure.

Ownership and Use: The site is owned by the United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4907

(Stump Pond-Lower)

Location: On an unnamed tributary to the Satucket River at Elm Street in Halifax, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'53" Longitude: 70°52'59"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
9	8	7350	11.5

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for an enlarged reservoir; a large area of shallow water would be created.

Remarks: The dam is an earth fill structure with Elm Street across the top. The spillway is the culvert under Elm Street. Trees are growing on both slopes of the dam. Erosion is occurring on both slopes, probably caused by surface runoff from Elm Street.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4908

Location: On an unnamed tributary to the Satucket River about 100 feet upstream of Route 106 in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'46" Longitude: 70°54'09"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
30	6	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits the potential for expansion.

Remarks: The dam is an earth fill structure. The spillway system consists of a low area in the fill over which flow passes. There are two concrete drop inlets with flashboards located near Route 106 and about 100 feet downstream from the dam.

Ownership and Use: Ownership is not known. The site is used by Morse Brothers to store water for use in cranberry bogs.

****

EXISTING SITE TA-4909 (Burrage Pond)

Location: On an unnamed tributary to Stump Brook near the Halifax - Hanson town line in Halifax, Mass.

Whitman, Mass. and Hanover, Mass. USGS quadrangles

Latitude: 42°00'45" Longitude: 70°52'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
208	8	1250	2.0

Potential for Expansion: Significant expansion does not appear practical. The relatively small drainage area limits expansion potential. Topography is not suitable for an enlarged reservoir; a large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The pond is divided into two separate ponds by a dike and a concrete flume. The principal spillway is a 2 bay concrete flume with flashboards. There are 5 other outlets from the Pond; a large 3 bay concrete flume with flashboards; another concrete flume with flashboards; a sheet-steel riser and corrugated metal pipe conduit; a concrete riser and concrete pipe conduit and a two-way lift pump. Fill has eroded from behind the head wall of the large flume and concrete in the outlet structures is spalling.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4910
(Chaffin Reservoir)

Location: On an unnamed tributary to Monponsett Pond about 1,100 feet upstream of the Penn-Central Railroad in Pembroke, Mass.

Hanover, Mass. USGS quadrangle

Latitude: 42°01'21" Longitude: 70°50'02"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	7	500	0.8

Potential for Expansion: Significant expansion does not appear practical. Stetson Pond, located immediately upstream, is surrounded by cottages which would be flooded.

Remarks: The dam is an earth fill structure. The principal spillway is a sheet-steel riser with a corrugated metal pipe conduit. The second outlet is a two bay concrete closed flume. The dam and spillways appear to be in good condition.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4911

(Chandler Mill Pond)

Location: On an unnamed tributary to Monponsett Pond at the Penn-Central Railroad in Hanson, Mass.

Hanover, Mass. USGS quadrangle

Latitude: 42°01'15" Longitude: 70°50'15"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	12	800	0.9

Potential for Expansion: Significant expansion does not appear practical. Stetson Pond, located upstream, is surrounded by cottages which would be flooded.

Remarks: The dam is an earth fill structure with a single line of the Penn-Central Railroad across the top. The spillway is a twin concrete drop structure with flashboards and twin concrete pipe conduits. There is an opening downstream of the flashboards to permit drainage from cranberry bogs located to the west of the reservoir.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-4912

Location: On an unnamed tributary to Burrage Pond about 300 feet south of Indian Crossway in Hanson, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°01'28" Longitude: 70°53'08"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	6	150	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits potential for expansion.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop inlet with flashboards. Only about one foot of drawdown can be accomplished as the upstream face of the structure has been backfilled with gravel. A structure located on the left side of the pond allows flow into the pond and acts as a lift pump to remove water.

Ownership and Use: The site is owned by Ellen Stillman and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-4913

Location: On an unnamed tributary to Burrage Pond about 1,100 feet downstream from the Halifax - Hanson town line in Halifax, Mass.

Whitman, Mass. USGS quadrangle

Latitude: 42°01'22" Longitude: 70°52'57"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	9	250	0.4

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure which surrounds the pond. The main outlet is a concrete closed flume with flashboards. The other outlet is also a concrete closed flume with two bays of flashboards. An inlet structure is located on the west end of the pond. The embankment is built with gravelly material. Trees and brush grow on both slopes. There is a considerable amount of leakage through the flashboards on the outlet structures.

Ownership and Use: The site is owned by Ellen Stillman and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-4914

Location: On White Oak Brook just northeast of the Penn-Central Railroad in Hanson, Mass.

Hanover, Mass. USGS quadrangle

Latitude: 42°01'44" Longitude: 70°51'09"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	6	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. A large area of shallow water would be created by expansion.

Remarks: The dam is an earth fill structure. The spillway is a closed timber flume with two bays of flashboards which outlets into a cranberry bog. A lift pump located at the northeast end of the pond is used for cranberry bog water management.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

TA-4902
Hobart Pond

TA-4909
Burrage Pond

TA-4913

EXISTING RESERVOIRS
SUBWATERSHED TA-49
SHUMATUSCACANT RIVER

USDA-SCS-HYATTSVILLE MD. 1973

LEGEND

SUBWATERSHED BOUNDARY

EXISTING POND OR RESERVOIR

4901

4902

4903

4904

4905

4906

4907

4908

4909

4910

4911

4912

4913

4914

N

SOURCE: USGS QUAD SHEETS
PLYMPTON-1962
WEYMOUTH-1958
WHITMAN-1962
HANOVER-1962
BRIDGEWATER-1962

SHUMATUSCACANT RIVER (TA-49)

TAUNTON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-50, Winnetuxet River

The Winnetuxet River subwatershed covers about 22,500 acres in the municipalities of Carver, Halifax, Kingston, Middleborough and Plympton, all in Plymouth County.

The Winnetuxet River originates in Carver and flows northeasterly through Plympton to its confluence with the Taunton River in Halifax. Major tributaries include: Bartlett Brook and Raven Brook which originate in Middleborough and flow northerly to the confluence with the Winnetuxet River in Halifax; and Palmer Mill Brook which originates in Halifax and flows southwesterly to the confluence with the Winnetuxet River in Halifax. Elevations range from a high of 174 feet on Mt. Carmel in Middleborough to a low of about 20 feet in Halifax. Geology of the subwatershed is characterized by schist bedrock overlain by from 30 to 40 feet of outwash sand and gravel.

Two potential reservoir sites and fourteen existing reservoirs were studied.

****

POTENTIAL SITE TA-5003

Location: On the Winnetuxet River about 700 feet upstream from Winnetuxet Street in Plympton, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°56'46" Longitude: 70°49'27"

Facilities Affected:

Facility	Elevation
5 houses	90
Garage	90
Mayflower Street	90
High Street	90
6 houses	85
2 commercial buildings	85
6 garages and sheds	85
9 houses	80
7 garages and sheds	80
Pleasant Street	80
3 houses	75
3 commercial buildings	75
4 garages and sheds	75
Town swimming area	75
Main Street (Route 58)	75
Cranberry bogs	75

POTENTIAL SITE TA-5003 (continued)

Facilities Affected: (continued)

Facility	Elevation
3 houses	70
2 garages and sheds	70
Winnetuxet Street	70
3 houses	65
2 garages and sheds	65
Parsonage Street	65
House	60
2 garages and sheds	60

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to bedrock in the foundation is estimated to be from 30 to 40 feet. Water holding capabilities appear to be poor. Leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: An auxiliary dike will be needed above elevation 85. Preliminary design information indicates that a concrete chute emergency spillway may be required at this site.

****

POTENTIAL SITE TA-5004

Location: On Whetstone Brook about 1,500 feet downstream from Plymouth Street in Middleborough, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°55'05" Longitude: 70°49'53"

Facilities Affected:

Facility	Elevation
2 houses	105
1 commercial building	105
Swimming pool	105
11 houses	100
5 garages or sheds	100
Plymouth Street	100
Cranberry bogs and pond	100
Garage	95

Geologic Conditions: Both abutments are outwash coarse gravel with sand and cobbles. Depth to schist bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

POTENTIAL SITE TA-5004 (continued)

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. See Existing Site TA-5009 for data on an existing pond which is within the potential pool area.

Public Ownership: Two small parcels of land at elevation 105 are owned by the Middleborough Conservation Commission.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- WINNETUXET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA 5003			DA= 9.91 SQ MI = 6342 AC				USGS QUAD- PLYMPTON							LATITUDE 41-56-46		LONGITUDE 70-49-27	
SITE RATING (3)			STREAM WATER QUALITY (B)				100-YR PRIN SPWY DESIGN STORM					RUNOFF = 5.50 IN, PEAK FLOW = 1987 CFS					
64.6	100	0.2	12360	30	41230	18.7	64.6	N	179	0.3	6890	72.6	175	78.4	32	60	0.21
74.1	964	1.7	3250	253	12400	28.2	74.1	N	1043	2.0	3010	82.1	651	87.6	42	139	1.54
78.9	2693	5.1	1610	478	9050	32.9	78.9	C	2772	5.1	1560	84.6	801	89.5	44	165	3.26
82.5	4825	9.1	1060	676	7550	36.5	82.5	C	4904	9.3	1040	86.4	902	90.0	44	172	4.88
SITE-TA 5004			DA= 1.40 SQ MI = 896 AC				USGS QUAD- PLYMPTON							LATITUDE 41-55-05		LONGITUDE 70-49-53	
SITE RATING (3)			STREAM WATER QUALITY (B)				100-YR PRIN SPWY DESIGN STORM					RUNOFF = 5.50 IN, PEAK FLOW = 406 CFS					
78.6	0	0.0		7		2.5	93.6	E	310	4.1	1760	96.1	87	98.4	22	31	*****
86.3	100	1.2	4390	17	25330	10.3	88.8	E	158	2.0	2780	91.1	29	92.8	17	18	0.17
89.3	158	2.0	3050	20	23590	13.2	91.8	E	237	3.2	2040	94.3	54	95.8	20	24	0.24
93.1	274	3.6	3010	42	19490	17.1	95.6	E	438	5.9	1890	98.0	133	99.8	24	35	0.37
95.9	448	6.0	2600	83	14090	19.9	98.4	E	727	9.7	1600	100.6	201	103.5	28	47	0.50

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5005

Location: On an unnamed tributary to the Winnetuxet River about 1,500 feet northwest of Thompson Street in Halifax, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 42°59'10" Longitude: 70°53'20"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
16	6	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. About 75 acres of cranberry bogs would be affected by expansion.

Remarks: The dam is an earth fill structure. The spillway is a 2 bay closed concrete flume with flashboards. Concrete in the spillway is cracked and spalled. Trees and brush are growing on the dam.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5006

Location: On an unnamed tributary to the Winnetuxet River about 1,000 feet west of Pine Street in Halifax, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'22" Longitude: 70°53'09"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
34	About 10	250	0.4

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. A 3,000 foot long dike would be needed.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop inlet with a pipe conduit. Small trees and brush are growing on the dam. There is wave erosion on the upstream slope.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5007

Location: On an unnamed tributary to the Winnetuxet River about 1,300 feet upstream from Brook Street in Plympton, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°57'01" Longitude: 70°47'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
23	7	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. Soils are sandy and seepage losses are probably quite high.

Remarks: The dam is an earth fill structure. The spillway is a half-round corrugated metal drop inlet with a corrugated metal conduit. The spillway is equipped with flashboards. Pine trees and brush are growing on the dam. Piping of fill material has occurred near the spillway. Tree roots penetrate the entire embankment and leakage is evident in many areas.

Ownership and Use: Ownership is not known. The site is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5008 (Bonney Pond)

Location: On an unnamed tributary to Colchester Brook about 1,500 feet downstream from Main Street in Plympton, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°57'50" Longitude: 70°49'02"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	12	900	1.4

Potential for Expansion: Surface area could be more than doubled. Center Street and Main Street would be affected. Cranberry bogs located upstream might also be affected.

Remarks: The dam is an earth fill structure. The center portion of the downstream slope is faced with stone. There are 4 outlet structures; all are concrete drop structures with flashboards. It appears that water has overtopped the embankment near the left abutment and eroded part of the fill material. Freeboard at the left end is only 0.5 feet.

Ownership and Use: The site is owned by Robert Whiting and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5009

Location: On Whetstone Brook at Plymouth Street in Middleborough, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°54'58" Longitude: 70°50'11"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
26	11	600	0.9

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure with Plymouth Street across the top. Upstream and downstream slopes are faced with stone. The spillway is a concrete drop inlet with flashboards, and a steel pipe conduit. The left side of the downstream slope is saturated by seepage through the embankment.

Ownership and Use: The site is owned by Elmer Raymond and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5010 (Muddy Pond)

Location: On an unnamed tributary to Muddy Pond Brook, east of Route 58 and south of Route 44 in Carver, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°54'58" Longitude: 70°47'47"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
64	3	650	1.0

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. The water level could be raised five feet without affecting facilities other than cranberry bogs.

Remarks: The dam is an earth fill structure. The principal spillway is a concrete open flume with flashboards. There is also a sheet-steel drop inlet spillway. The principal spillway is in poor condition; flashboard channels are broken and there is excessive leakage.

Ownership and Use: The site is owned by Kenneth Shaw and is used to store water for use in cranberry bogs.

EXISTING SITE TA-5011

Location: On an unnamed tributary to Doten Brook about 50 feet upstream from Plymouth Road in Carver, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°55'17" Longitude: 70°47'05"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	5	400	0.6

Potential for Expansion: It appears that the water level could be raised about five feet and the surface area doubled without affecting any facilities.

Remarks: The edge of the pond is about 50 feet from Plymouth Street. A low earth fill dam covered with trees, brush and grass maintains the pool level. Water flows over the embankment to enter the spillway located between the dam and Plymouth Street. The spillway is a corrugated metal pipe drop inlet which is flush with natural ground level. A gate in the pond allows drainage through the spillway system.

Ownership and Use: The site is owned by Arthur Godfrey and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5012

Location: On an unnamed tributary to the Winnetuxet River about 300 feet upstream from Fuller Street in Carver, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°54'29" Longitude: 70°48'42"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	7	150	0.2

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. The spillway is an open timber flume with flashboards. Trees and brush are growing along the upstream slope.

Ownership and Use: The site is owned by Harvey Burgess and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5013

Location: On an unnamed tributary to Doten Brook about 6,000 feet north of Shurtleff Corner on Route 44 in Carver, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°55'40" Longitude: 70°46'14"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	8	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The pond is surrounded by cranberry bogs which would be flooded. A large area of shallow water would be created by expansion.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. There are 4 outlet structures. The principal spillway is a two bay concrete drop inlet with corrugated metal pipe conduits. The other outlets include a concrete drop inlet with flashboards and corrugated metal pipe conduit; a timber head wall with flashboards set on a concrete culvert; and a timber drop inlet with concrete conduit. The timber drop inlet is in poor condition. There is leakage through the timber head wall outlet.

Ownership and Use: The site is owned by A.D. Makepeace Co. and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-5014

Location: On an unnamed tributary to Doten Brook about 1,800 feet upstream of High Street in Carver, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°56'23" Longitude: 70°46'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	8	100	0.2

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop inlet with flashboards and a concrete pipe conduit.

Ownership and Use: The site is owned by A.D. Makepeace Co. and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5015

Location: On Whetstone Brook about 1,500 feet downstream from Prospect Road in Plympton, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°56'08" Longitude: 70°50'04"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	5	1500	2.3

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. There are 4 outlet structures. Three are concrete flumes with flashboards. The other outlet is a concrete drop inlet with a clay pipe conduit. The clay conduit may be broken. Concrete in all flumes is spalled.

Ownership and Use: The site is owned by Rolene Atwood and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5016

Location: On Colchester Brook about 2,500 feet upstream from Main Street in Plympton, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°57'40" Longitude: 70°48'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
40	6	650	1.0

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. There are four outlet structures; two are concrete flumes with flashboards. The other structure is a large sheet-steel drop inlet with corrugated metal pipe conduit. There is also a canal which outlets to a two-way lift pump. Concrete in the flashboard channels of the outlet structures is badly spalled. There is a boil near the left section of the dam.

Ownership and Use: The site is owned by United Cape Cod Cranberry Company and is used to store water for use in cranberry bogs.

****

TA-5006

TA-5008
Bonney Pond

TA-5007

TA-5010
Muddy Pond

EXISTING RESERVOIRS
SUBWATERSHED TA-50
WINNETUXET RIVER

5006
5005
5008
5003
5016
5007
5014
5013
5011
5010
5015
5009
5004
5012

LEGEND

- WATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

SOURCE: USGS QUAD. SHEETS
BRIDGEWATER-1962
PLYMPTON-1962

WINNETUXET RIVER (TA-50)

TAUNTON RIVER STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA SCS HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-51, Taunton River

This portion of the Taunton River subwatershed covers about 14,450 acres in the municipalities of Bridgewater, East Bridgewater, Halifax and Middleborough in Plymouth County; and Raynham in Bristol County.

The Taunton River originates as the Town River in Bridgewater and flows southerly to the study area boundary and then westerly forming the Bridgewater - Middleborough boundary. Major tributaries are Snows Brook and Sawmill Brook which both originate in Bridgewater and flow southerly to the confluence with the Taunton River. Elevations range from a high of about 140 feet in Bridgewater to a low of about 20 feet, also in Bridgewater. Geology of the subwatershed is characterized by schist bedrock overlain by from 25 to 50 feet of outwash sand and gravel.

Three potential reservoir sites and four existing reservoirs were studied.

****

POTENTIAL SITE TA-5101

Location: On an unnamed tributary to Sawmill Brook about 1,300 feet upstream from Routes 18 and 28 in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°57'06" Longitude: 70°58'28"

Facilities Affected:

Facility	Elevation
2 houses	45
2 sheds	45
South Street	45
2 houses	40
Dirt road	40

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to schist bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Drilling may show relatively impervious sediments underlaying the outwash sand and gravel. Pervious borrow material for dam construction was located near the site. Impervious material was not located.

Engineering Notes: An auxiliary dike will be needed above elevation 40. The left abutment is recommended for the excavated emergency spillway location.

****

POTENTIAL SITE TA-5102

Location: On South Brook about 200 feet upstream from South Street in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°58'43" Longitude: 70°58'58"

Facilities Affected:

Facility	Elevation
7 houses	85
12 houses	80
Unnamed road	80
3 houses	75

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to schist bedrock in the foundation is estimated to be from 25 to 30 feet. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete monolithic conduit emergency spillway may be required at this site. A housing development is presently being constructed near the potential pool area.

****

POTENTIAL SITE TA-5103

Location: On South Brook about 300 feet upstream from Plymouth Street in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'16" Longitude: 70°57'34"

Facilities Affected:

Facility	Elevation
5 houses	50
18 houses	45
3 garages or sheds	45
Laurel Street	45
9 houses	40
2 garages or sheds	40
Swimming pool	40
Water Street	40

POTENTIAL SITE TA-5103 (continued)

Geologic Conditions: Both abutments are outwash sand and gravel, possibly shallow to silt in the foundation. Depth to schist bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be fair; some leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 45.

Public Ownership: About 25 acres in the potential pool area is owned by the Massachusetts Division of Forests and Parks.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA 5101 DA= 0.71 SQ MI = 454 AC USGS QUAD- BRIDGEWATER LATITUDE 41-57-06 LONGITUDE 70-58-28																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 228 CFS																	
30.2	0	0.0		5		2.3	36.0	E	157	4.1	3140	38.3	64	41.8	14	22	*****
34.8	100	2.5	5890	39	15280	6.8	37.3	E	225	5.9	2620	39.7	75	42.9	15	26	0.14
35.9	145	3.8	4540	46	14140	7.8	38.4	E	290	7.6	2270	40.4	80	43.5	16	30	0.18
36.8	189	5.0	3830	53	13650	8.8	39.3	E	351	9.3	2060	41.0	85	44.0	16	33	0.23
SITE-TA 5102 DA= 0.60 SQ MI = 384 AC USGS QUAD- BRIDGEWATER LATITUDE 41-58-43 LONGITUDE 70-58-58																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 192 CFS																	
73.0	0	0.0		5		1.0	79.1	E	133	4.1	6150	81.4	51	86.1	14	15	*****
78.4	100	3.0	9520	32	29470	6.4	78.4	E	105	3.3	9080	82.1	57	86.3	14	16	0.14
79.6	146	4.6	7150	39	26860	7.6	79.6	E	151	4.6	6920	83.1	65	87.0	15	18	0.18
80.6	192	6.0	5920	46	24600	8.7	80.6	E	197	6.1	5780	83.9	72	87.6	16	20	0.21
SITE-TA 5103 DA= 3.09 SQ MI = 1978 AC USGS QUAD- BRIDGEWATER LATITUDE 41-59-16 LONGITUDE 70-57-34																	
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 798 CFS																	
32.5	0	0.0		17		2.5	43.2	E	684	4.1	2360	45.7	196	48.8	19	34	*****
36.0	100	0.6	16300	40	40550	6.0	42.5	E	586	3.5	2780	45.0	179	48.0	18	29	0.18
39.0	248	1.5	7330	60	30260	9.0	43.5	E	717	4.3	2540	45.9	201	48.9	19	35	0.41
42.4	544	3.3	4010	120	18160	12.3	44.9	E	939	5.6	2330	47.3	232	50.3	20	45	0.75
45.3	989	6.0	2700	186	14330	15.2	47.8	E	1551	9.3	1720	50.2	299	53.6	24	69	1.14

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5104

Location: On the Taunton River about 300 feet downstream from Mill Street, Route 106, in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'31" Longitude: 70°56'21"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
90	13	90,400	141.2

Potential for Expansion: Significant expansion does not appear practical. Many houses and streets would be affected.

Remarks: The dam is a concrete gravity structure. A fish ladder is part of the dam. It appears that the river has overtopped the right abutment and caused some erosion. The masonry side wall of the dam is cracked and has seepage through it. Concrete in the fish ladder is cracked and spalled.

Ownership and Use: The pond is owned by Mitchel Wolski and is an old mill pond which is no longer used.

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EXISTING SITE TA-5105 (Blood Pond)

Location: On an unnamed tributary to the Taunton River about 50 feet upstream of Plymouth Street, Route 106, in East Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°59'36" Longitude: 70°56'15"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
3	11	500	0.8

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments. Several streets and a cemetery would be affected.

Remarks: The dam is an earth fill structure. The downstream slope is faced with stone masonry. The spillway is a concrete flume with a drop structure at the downstream end. There are trees growing on the dam. Concrete in the spillway head wall is cracked.

Ownership and Use: The pond is owned by Mr. Florence Fortier and is an old ice pond which is no longer used.

****

EXISTING SITE TA-5106 (Carver Pond)

Location: On South Brook about 1,000 feet upstream from Summer Street in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°58'49" Longitude: 70°58'06"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
31	6	950	1.5

Potential for Expansion: It appears possible to double the surface area without affecting facilities.

Remarks: The dam is an earth fill structure. There are two spillways; both are concrete flumes with flashboards. It appears that the dam has been overtopped near the spillways. There is seepage along the entire length of the dam.

Ownership and Use: The pond is owned by the Town of Bridgewater and is used for recreation.

****

EXISTING SITE TA-5107 (Ice Pond)

Location: On Sawmill Brook about 900 feet upstream from Conant Street in Bridgewater, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°57'38" Longitude: 70°57'22"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	11	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. A dike around two sides of the pond would be required. A preliminary investigation report for this site is on file at the Soil Conservation Office in Raynham, Mass.

Remarks: The dam is an earth fill structure. A section of the dam which was the original outlet has been rebuilt using fine-grained material which appears to be easily erodible. The outlet is an excavated channel with a series of wooden drops which step the water to the base of the dam. Erosion along the channel is a problem.

Ownership and Use: The pond is owned by the Massachusetts State Correctional Institution and is leased to the Bridgewater Conservation Commission for recreation.

****

LEGEND

SUBWATERSHED BOUNDARY

DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING RESERVOIR OR POND

SOURCE: USGS QUAD. SHEETS
BRIDGEWATER-1962
TAUNTON-1962
WHITMAN-1962

TAUNTON RIVER (TA-51)

TAUNTON RIVER STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-52, Taunton River

This portion of the Taunton River subwatershed covers about 28,050 acres in the municipalities of Lakeville and Middleborough in Plymouth County; and Bridgewater, Raynham and Taunton in Bristol County.

The Taunton River forms the northeastern study area boundary and then flows southwesterly and westerly along the Raynham - Middleborough and Raynham - Taunton boundaries. The major tributaries are: the Forge River which originates in Raynham and flows southerly to the confluence with the Taunton River; and Poguoy Brook which originates in Lakeville and flows northwesterly to the confluence with the Taunton River. Elevations range from a high of about 190 feet in Taunton to a low of about 10 feet, also in Taunton. Geology of the subwatershed is characterized by schist bedrock overlain by from 5 to 40 feet of outwash sand and gravel.

Five potential reservoir sites and thirteen existing reservoirs were studied.

****

POTENTIAL SITE TA-5201

Location: On Puddingshear Brook about 500 feet upstream from the northwestbound lane of Route 25 in Middleborough, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°54'41" Longitude: 70°58'35"

Facilities Affected:

Facility	Elevation
4 houses	35
3 garages or sheds	35
Nursing Home	35
Farm Pond	35
Pleasant Street	35
5 houses	30
Barn	30
Commercial building	30
House	25

Geologic Conditions: Both abutments are outwash sand and gravel underlain by schist or conglomerate bedrock. Depth to bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-5202

Location: On Thompsons Brook about 2,900 feet downstream from Highstone Road in Taunton, Mass. The site is at Big Bearhole Pond.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°51'55" Longitude: 70°59'19"

Facilities Affected:

Facility	Elevation
9 houses	75
6 buildings	75
2 houses	70
Turner Street	70
State Route 79	70
17 houses	65
3 kennels	65
8 buildings	65
7 houses	60
Mobile home	60
2 buildings	60
Highstone Road	60
House	55

Geologic Conditions: The right abutment is poorly graded sand and gravel outwash. The left abutment is poorly graded fine sand outwash with gravel. Depth to bedrock in the foundation is estimated to be from 50 to 60 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. See Existing Site TA-5202 for data on Big Bearhole Pond.

Public Ownership: The dam site and the major portion of the pool area are within Massasoit State Park.

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POTENTIAL SITE TA-5205

Location: On Bassett Brook about 550 feet downstream from Pine Street in Raynham, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°55'07" Longitude: 70°59'59"

POTENTIAL SITE TA-5205 (continued)

Facilities Affected:

Facility	Elevation
House	40
Garage	40
House	30
Forest Street	25
Pine Street	25

Geologic Conditions: The left abutment is silty sand with fine sand located high on the slope. The right abutment is sand or silty sand with poorly graded gravel high on the slope. Depth to schist bedrock in the foundation is estimated to be from 25 to 30 feet. Waterholding capabilities appear to be good. There may be leakage high on the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-5208

Location: On an unnamed tributary to the Taunton River about 550 feet upstream from Hill Street in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°53'47" Longitude: 70°01'10"

Facilities Affected:

Facility	Elevation
Route 44	50

Geologic Conditions: Both abutments are thin discontinuous deposits of glacial till underlain by schist bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock.

****

POTENTIAL SITE TA-5209

Location: On Dam Lot Brook about 900 feet upstream from Orchard Street in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°54'59" Longitude: 70°02'28"

Facilities Affected:

Facility	Elevation
8 houses	35
Route 24	35
House	30
King Street	30

Geologic Conditions: Both abutments are fine outwash sand with some coarse sand and gravel. Depth to schist bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be fair; some leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY					DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)		ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5201 DA= 0.90 SQ MI = 576 AC USGS QUAD-BRIDGEWATER LATITUDE 41-54-41 LONGITUDE 70-58-35																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.80 IN, PEAK FLOW = 299 CFS																	
26.2	0	0.0		6		2.3	33.7 E	199	4.1	3400		36.0	95	38.9	15	12	*****
32.5	125	2.5	6190	49	15860	8.5	35.0 E	298	6.1	2600		37.2	111	39.9	16	15	0.18
SITE-TA-5202 DA= 1.66 SQ MI = 1062 AC USGS QUAD-ASSAWOMPSET POND LATITUDE 41-51-55 LONGITUDE 70-59-19																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.50 IN, PEAK FLOW = 522 CFS																	
48.0	0	0.0		10		2.0	58.1 E	367	4.1	1920		60.6	78	63.9	18	5	*****
52.8	100	1.1	7880	33	24130	6.8	59.3 E	433	4.9	1820		61.6	90	64.8	19	5	0.18
55.6	216	2.4	4020	47	18420	9.7	60.1 E	493	5.6	1760		62.5	100	65.6	20	6	0.32
59.6	448	5.1	2250	68	14760	13.7	62.1 E	666	7.5	1520		64.6	123	67.6	22	9	0.54
62.5	681	7.6	1710	98	11790	16.5	65.0 E	978	11.1	1190		67.4	155	70.4	24	15	0.73
63.5	797	9.0	1530	111	10990	17.6	66.1 E	1129	12.8	1080		68.5	167	71.5	25	18	0.81

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5205	DA= 1.08 SQ MI = 691 AC						USGS QUAD-BRIDGEWATER						LATITUDE 41-53-58		LONGITUDE 70-59-18	
SITE RATING (1)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.70 IN, PEAK FLOW = 311 CFS					
19.2	0	0.0		9		1.2	29.7 E	239	4.1	1810	32.0	46	34.5	17	31	*****
25.2	100	1.7	3440	24	14450	7.1	27.7 E	174	3.0	1970	30.0	35	32.0	14	16	0.16
27.5	164	2.8	2830	29	16030	9.6	30.0 E	251	4.4	1850	32.4	48	34.4	16	29	0.23
29.7	228	4.0	2710	33	18530	11.7	32.2 E	337	5.8	1830	34.5	60	36.5	19	52	0.30
32.5	344	6.0	2810	48	19960	14.5	35.0 E	492	8.5	1960	37.5	77	39.9	22	119	0.40
SITE-TA-5208	DA= 0.62 SQ MI = 397 AC						USGS QUAD-TAUNTON						LATITUDE 41-53-47		LONGITUDE 70-01-10	
SITE RATING (1)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.70 IN, PEAK FLOW = 167 CFS					
32.2	0	0.0		4		2.2	41.8 E	137	4.1	2350	44.2	54	46.5	17	10	*****
40.7	100	3.0	4260	23	18220	10.7	43.2 E	191	5.8	2230	45.5	66	47.8	18	13	0.14
41.8	130	3.9	3760	33	14870	11.8	44.3 E	245	7.3	2000	46.5	75	49.4	19	16	0.17
42.5	156	4.6	3360	39	13400	12.5	45.0 E	288	8.7	1830	47.0	79	49.8	20	17	0.18
SITE-TA-5209	DA= 2.17 SQ MI = 1389 AC						USGS QUAD-TAUNTON						LATITUDE 41-54-59		LONGITUDE 70-02-28	
SITE RATING (2)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.70 IN, PEAK FLOW = 708 CFS					
20.4	0	0.0		15		2.4	26.5 E	480	4.1	1540	28.9	184	31.9	14	18	*****
22.7	100	0.8	7220	64	11370	4.8	25.2 E	337	2.9	2140	27.7	161	30.0	12	13	0.18
24.2	218	1.9	3920	93	9160	6.3	26.7 E	532	4.6	1610	29.2	192	31.9	14	18	0.35
26.4	455	3.9	2660	135	8980	8.3	28.9 E	872	7.5	1390	31.4	228	34.5	17	29	0.61
28.0	692	6.0	2230	166	9310	10.0	30.5 E	1182	10.2	1310	32.8	252	36.9	19	42	0.80
28.7	810	7.0	2050	180	9250	10.7	31.2 E	1335	11.5	1240	33.3	260	37.3	19	45	0.88

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5202

(Big Bearhole Pond)

Location: On Thompson Brook about 3,000 feet downstream from Highstone Road in Massasoit State Park, Taunton, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°51'55" Longitude: 70°59'19"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
40	13	1050	1.7

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-5202 for details.

Remarks: The dam is an earth fill structure. The spillway is a closed concrete flume with flashboards. Erosion is occurring, caused by runoff from the roadway across the top of the dam.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

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EXISTING SITE TA-5206

Location: On a tributary to Furnace Brook about 500 feet east of Precinct Street in Massasoit State Park, Taunton, Mass.

Assawompset Pond and Assonet, Mass. USGS quadrangles

Latitude: 41°52'23" Longitude: 70°59'54"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
42	5	500	0.8

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure with a roadway on the upstream slope. There are 4 outlet structures; two concrete flumes with flashboards, a concrete drop inlet with flashboards, and a timber flume with flashboards. Concrete is cracked in all outlet structures. Trees and brush are growing on the downstream slope of the dam.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources. The site is leased to V. Halunen and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5210 (Middle Pond)

Location: On a tributary to Furnace Brook about 4,500 feet downstream from Highstone Road in Massasoit State Park, Taunton, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°52'09" Longitude: 70°59'26"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	12	1100	1.7

Potential for Expansion: Significant expansion does not appear practical. Topography limits any significant increase in surface area.

Remarks: The dam is an earth fill structure. There are 4 spillways. All are concrete drop structures which have been modified to release flows from below the surface of the pond. Two of the structures permit storm flows to enter from the top of the drop inlet. Trees and brush grow on the dam.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

****

EXISTING SITE TA-5211 (Kings Pond)

Location: On a tributary to Furnace Brook about 6,000 feet downstream from Highstone Road in Massasoit State Park, Taunton, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°52'21" Longitude: 70°59'29"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
26	7	1200	1.9

Potential for Expansion: Significant expansion does not appear practical. Topography limits any significant increase in surface area.

Remarks: The dam is an earth fill structure. The spillway is an open concrete flume with two bays of flashboards. Several large trees are growing on the dam.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

****

EXISTING SITE TA-5212 (Richmond Pond)

Location: On an unnamed tributary to the Taunton River at Middleboro Avenue in Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latutude: 41°52'57" Longitude: 71°01'29"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	5	1350	2.1

Potential for Expansion: Significant expansion does not appear practical. An increase in surface area would affect the Taunton airport. Middleboro Avenue would need to be raised to achieve a minor increase in pond surface area.

Remarks: The dam is an earth fill structure with Middleboro Avenue across the top. The spillway is a short double bay open concrete flume with flashboards. Small trees are growing on the downstream slope. Seepage occurs through or under the right half of the dam.

Ownership and Use: The site is owned by Charles Richmond and John Areias and is used to store water.

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EXISTING SITE TA-5213 (Hewitt Pond)

Location: On an unnamed tributary to the Forge River at the outlet of Titicut Swamp in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°56'47" Longitude: 71°02'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	11	1000	1.5

Potential for Expansion: Expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The spillway is an open concrete flume with flashboards. Spillway sidewalls and flashboard channels have recently been replaced. There is also an abandoned outlet structure which has been filled in. Trees are growing on both slopes. There are many leaks evident along the downstream toe of the slope.

Ownership and Use: The site is owned by Lillian Hewitt and is used primarily for recreation.

****

EXISTING SITE TA-5214 (Tracy Pond)

Location: On an unnamed tributary to the Forge River about 75 feet upstream from White Street in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°56'10" Longitude: 71°02'47"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
Originally 9	9	1400	2.2

Potential for Expansion: The dam might be rebuilt and the original 9 acre pond restored. The Soil Conservation Service in Raynham has a reconnaissance report on this site.

Remarks: The dam has been breached and maintains only a shallow pool.

Ownership: The site is owned by Mr. Lacey.

****

EXISTING SITE TA-5215 (Johnson Pond)

Location: On an unnamed tributary to the Forge River at Route 104 in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°55'27" Longitude: 71°03'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	12	1650	2.6

Potential for Expansion: Significant expansion does not appear practical. Three streets and many houses would be affected.

Remarks: The dam is an earth fill structure with Main Street and a 30 foot wide town park along the top. The upstream slope is faced with a stone masonry wall. The spillway is a concrete drop structure with flashboards. Concrete in the spillway is cracked and spalled.

Ownership and Use: The site is owned by the Town of Raynham and is used for recreation.

****

EXISTING SITE TA-5216 (Wilbur Pond)

Location: On Pine Swamp Brook about 550 feet upstream from Mill Street in Raynham, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°56'12" Longitude: 71°03'42"

EXISTING SITE TA-5216 (continued)

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
About 5*	8	3250	5.1

Potential for Expansion: It appears that the pond could be rebuilt to its original size. Any further expansion would create a large area of shallow water.

Remarks: The dam is an earth fill structure that has been breached.

Ownership: The site is owned by Harry McPherson.

*Original pool area was about 15 acres.

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EXISTING SITE TA-5217 (Kings Pond)

Location: On Pine Swamp Brook at Gardner Street in Raynham, Mass.
Taunton, Mass. USGS quadrangle
Latitude: 41°55'57" Longitude: 71°03'15"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	17	3450	5.4

Potential for Expansion: Expansion does not appear practical. A new sub-division area would be affected.

Remarks: The dam is an earth fill structure with Gardner Street across the top. The downstream slope is faced with stone, the upstream slope is faced with concrete. The spillway is a concrete drop structure and a stone masonry culvert. There are two gates in the drop structure. One is used to drain the pond and the other was formerly used to supply water to a turbine.

Ownership and Use: The site is owned by the Town of Raynham and is used to store water.

****

EXISTING SITE TA-5218

Location: On Poquoy Brook west of Route 18 and south of Route 44 in Lakeville, Mass.
Bridgewater, Mass. USGS quadrangle
Latitude: 41°53'45" Longitude: 70°57'49"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
35	7	3450	5.4

Potential for Expansion: It appears possible to increase water depth by about five feet without affecting facilities. Surface area would not be significantly increased.

EXISTING SITE TA-5218 (continued)

Remarks: The dam is an earth fill structure. The spillway is a two bay closed concrete flume with flashboards. Trees are growing on the upstream slope.

Ownership and Use: The site is owned by the L.B. Handy Company and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-5219 (Joses Meadow Pond)

Location: On an unnamed tributary to Purchase Brook about 600 feet upstream from Route 44 in Middleborough, Mass.
Bridgewater, Mass. USGS quadrangle
Latitude: 41°54'12" Longitude: 70°55'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	5	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. There are two spillways; a timber drop inlet and a concrete drop inlet.

Ownership and Use: The site is owned by Marian Griffith and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-5220 (Little Bearhole Pond)

Location: On an unnamed tributary to Thompson Brook located west of Middle Pond in Massasoit State Park, Taunton, Mass.
Assawompset Pond, Mass. USGS quadrangle
Latitude: 41°52'08" Longitude: 70°59'42"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	5	16	.03

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The spillway is an open timber flume with flashboards. The timber flume is deteriorating. Trees and brush are growing on the dam. Inflow to the pond comes from Middle Pond which is located to the east.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is leased to J. Halunen for storage of water for use in cranberry bogs.

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TA-5210
Middle Pond

TA-5214
Tracy Pond

TA-5215
Johnson Pond

EXISTING RESERVOIRS
SUBWATERSHED TA-52
TAUNTON RIVER

USDA-SCS-HYATTSVILLE, MD, 1979

LEGEND

- SUBWATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING RESERVOIR OR POND

5213 5214 5216 5217 5215 5205 5201 5219 5218 5209 5208 5212 5206 5211 5220 5210 5202

SOURCE - USGS QUAD. SHEETS
ASSAWOMPSET POND – 1963
ASSONET – 1963
BRIDGEWATER – 1962
TAUNTON – 1962

LOCATION MAP

TAUNTON RIVER (TA-52)

TAUNTON RIVER STUDY AREA
MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-53, Nemasket River

The Nemasket River subwatershed covers an area of about 44,800 acres in the municipalities of Lakeville, Middleborough, and Rochester in Plymouth County; and Acushnet, Dartmouth, Freetown and New Bedford in Bristol County.

The Nemasket River flows northerly from Assawompset Pond in Lakeville to the confluence with the Taunton River in Middleborough. The major tributaries are Fall Brook which originates in Freetown and flows northeasterly into Long Pond and Assawompset Pond; and Black Brook which originates in Middleborough and flows southerly into Great Quittacas Pond and Assawompset Pond. Elevations range from a high of about 210 feet in Lakeville to a low of about 20 feet in Middleborough. Geology of the subwatershed is characterized by schist or granitic bedrock overlain by from 10 to 60 feet of outwash sand and gravel, or glacial till.

Four potential reservoir sites and twelve existing reservoirs were studied.

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POTENTIAL SITE TA-5301

Location: On an unnamed tributary to the Nemasket River about 600 feet upstream from East Main Street in Middleborough, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°53'58" Longitude: 70°53'35"

Facilities Affected:

Facility	Elevation
3 houses	75
Garage	75
Wood Street	75
2 houses	70
East Main Street	70
3 houses	65
2 sheds	65

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 50 to 60 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-5303

Location: On Beaverdam Brook about 1,100 feet upstream from Plain Street in Middleborough, Mass.

Bridgewater, Mass. USGS quadrangle

Latitude: 41°55'33" Longitude: 70°54'39"

Facilities Affected:

Facility	Elevation
Power line poles	70
Power line towers	70

Geologic Conditions: Both abutments are sand and gravel outwash. Depth to schist bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be fair; slight leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Waterholding capabilities might be improved by a cutoff to bedrock in the foundation.

Public Ownership: The Middleborough Conservation Commission owns two small parcels of land in the potential pool area.

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POTENTIAL SITE TA-5306

Location: On Fall River immediately upstream of Route 28 in Middleborough, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°52'09" Longitude: 70°52'53"

Facilities Affected:

Facility	Elevation
15 houses	95
10 garages	95
Barn	95
Wareham Street	95
Cemetery	95
Middleborough pumping station	95
13 houses	90
Mill	90
Tispaquin Street	90
Power line poles	90
Camp Yomacas buildings	90
17 houses	85
Swimming pool	85
Mobile home	85
Camp Avoda buildings	85
Tispaquin Pond	84

POTENTIAL SITE TA-5306 (continued)

Geologic Conditions: The right abutment is silty sand low on the slope and poorly graded sand and gravel outwash at higher elevations. The left abutment is glacial till with cobbles. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be fair; leakage is expected high on the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

Public Ownership: Public land around Tispaquin Pond includes a portion of the Western Memorial Town Forest; and a portion of Camp Tispaquin which is being acquired by the Town of Middleborough.

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POTENTIAL SITE TA-5307

Location: On Fall Brook about 2,000 feet upstream from Braley Road in Freetown, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°46'37" Longitude: 70°58'17"

Facilities Affected:

Facility	Elevation
3 houses	100
Chipaway Road	100
3 houses	95
8 houses	90
Garage	90
Barn	90
2 commercial buildings	90
Gas pipeline	90
Washburn Road	90
Chace Road	90
Penn-Central Railroad	90

Geologic Conditions: The right abutment is poorly graded sand and gravel outwash. The left abutment is sand and gravel outwash at low elevations and granitic bedrock at higher elevations. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete chute or drop-structure emergency spillway will be required at this site. Three auxiliary dikes will be needed above elevation 90.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-NEMASKET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ** TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5301	DA= 1.12 SQ MI = 717 AC						USGS QUAD-BRIDGEWATER				LATITUDE 41-53-58		LONGITUDE 70-53-35			
SITE RATING (3)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.40 IN, PEAK FLOW = 346 CFS					
50.7	0	0.0		6		4.6	59.1 E	248	4.1	2590	61.5	62	64.3	18	17	*****
55.9	100	1.7	7390	33	22360	9.8	58.4 E	208	3.5	3560	60.8	59	62.8	17	14	0.16
59.6	266	4.4	2980	54	14770	13.7	62.1 E	423	7.1	1870	64.6	76	67.0	21	22	0.34
62.5	432	7.1	2000	66	13060	16.5	65.0 E	621	10.3	1390	67.4	88	69.9	24	28	0.47
64.8	597	10.0	1580	77	12290	18.7	67.3 E	812	13.6	1160	69.6	99	72.1	26	34	0.59
SITE-TA-5303	DA= 0.98 SQ MI = 627 AC						USGS QUAD-BRIDGEWATER				LATITUDE 41-55-33		LONGITUDE 70-54-39			
SITE RATING (2)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.60 IN, PEAK FLOW = 80 CFS					
57.8	0	0.0		3		5.8	64.3 E	217	4.1	1050	66.4	128	67.8	16	18	*****
****THIS SITE LACKS SUFFICIENT STORAGE FOR BENEFICIAL WATER.****																
SITE-TA-5306	DA= 6.74 SQ MI = 4314 AC						USGS QUAD-ASSAWOMPSET				LATITUDE 41-52-09		LONGITUDE 70-52-53			
SITE RATING (2)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM				RUNOFF = 5.20 IN, PEAK FLOW = 961 CFS					
69.6	0	0.0		14		7.6	85.6 E	1492	4.1	1240	88.1	565	90.0	28	29	*****
75.4	100	0.3	19160	20	94990	13.3	85.9 E	1634	4.5	1170	88.4	586	90.4	28	30	0.21
81.9	383	1.1	5430	151	13740	19.9	86.4 E	1831	5.1	1140	88.8	616	90.8	29	32	0.69
85.1	1232	3.4	1940	366	6540	23.1	87.6 E	2425	6.6	990	90.0	698	91.9	30	35	1.68
86.4	1797	5.0	1550	456	6090	24.4	88.9 E	3187	8.8	870	91.4	838	93.6	32	40	2.19

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER SUBWATERSHED-NEMASKET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5307	DA= 9.21 SQ MI = 5894 AC						USGS QUAD-ASSAWOMRSET					LATITUDE 41-46-37		LONGITUDE 70-58-17			
SITE RATING (3)	STREAM WATER QUALITY (B)						100-YR PRIN SPWY DESIGN STORM					RUNOFF = 5.40 IN, PEAK FLOW = 1696 CFS					
79.0	0	0.0		74		1.0	86.1	D	2038	4.1	830	90.9	762	95.6	18	42	*****
80.1	100	0.2	13400	157	8530	2.0	80.1	N	174	0.4	7710	88.8	598	93.5	15	31	0.21
82.6	656	1.2	3020	281	7060	4.6	82.6	N	730	1.5	2720	91.8	872	96.9	19	50	1.12
85.6	1769	3.5	1330	438	5360	7.6	85.6	D	1843	3.8	1280	92.6	979	96.8	19	49	2.40
87.9	2882	5.9	940	551	4920	9.8	87.9	C	2956	6.0	920	93.9	1123	97.8	20	57	3.34
88.9	3438	7.0	830	600	4780	10.8	88.9	C	3512	7.1	820	94.4	1189	98.1	20	61	3.78

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5308

Location: On an unnamed tributary to Fall Brook about 3,000 feet south of the junction of Chace Road and Burns Lane in Freetown, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°45'18" Longitude: 70°59'27"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	10	500	0.8

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments.

Remarks: The dam is an earth fill structure and is a series of dikes. The spillways are two half-round corrugated metal drop inlets with corrugated metal pipe conduits. There are also two gates to drain the pond. Trees and brush are growing on the dam. There appears to be seepage through or under the dam.

Ownership and Use: The site is owned by Chippaway Corporation and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5309

Location: On Fall Brook about 6,100 feet upstream from Chace Road in Freetown, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°45'04" Longitude: 70°59'08"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	5	1850	2.9

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to the lack of high abutments. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. There are two spillways. A concrete pipe with flashboards outlets into a by-pass canal and an open concrete flume with flashboards outlets into a cranberry bog.

Ownership and Use: The site is owned by Chippaway Corporation and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5310

Location: On Fall Brook about 150 feet upstream from Route 140 in Freetown, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°46'21" Longitude: 70°57'46"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
14	6	6050	9.5

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created. A factory, several houses, and three roads would be affected.

Remarks: The dam is a stone overfall structure with concrete cap. There is also a gate structure used as a pond drain. The right downstream wingwall is undermined.

Ownership and Use: The site is owned by Stillwater Assoc. and is utilized for factory use.

****

EXISTING SITE TA-5311 (Woods Pond)

Location: On Woods Brook at Chestnut Street in Middleborough, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°53'15" Longitude: 70°51'10"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
50	3	450	0.7

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure with Chestnut Street across the top. The upstream slope is partially riprapped. The spillway is a concrete drop structure with two bays of flashboards and a concrete box culvert under Chestnut Street. Two diversion structures located downstream divert water to cranberry bogs.

Ownership and Use: The site is owned by John Howes and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5312

Location: On an unnamed tributary to Fall Brook west of Wood Street in Middleborough, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°51'40" Longitude: 70°53'56"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
50	4	150	0.2

Potential for Expansion: Expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The spillway is a sheet-steel drop inlet with flashboards. The pond is very shallow and many dead trees are standing in the pool area.

Ownership and Use: Ownership of the site is not known. The site is used by A. Pannanen to store water for use in cranberry bogs.

****

EXISTING SITE TA-5313 (The Reservoir)

Location: On Bates Brook about 1,000 feet upstream of Stetson Street in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°51'44" Longitude: 70°56'36"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
23	4	150	0.2

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The spillway is a closed concrete flume with two bays of flashboards. There is excessive leakage through the flashboards. There appears to be leakage through the fill at the left end of the dam.

Ownership and Use: The site is owned by Robert Rounsville and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5314 (Mill Pond)

Location: On an unnamed tributary to Hathaway Brook about 1,000 feet upstream from Highland Road in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°49'18" Longitude: 70°57'59"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
2	13	1350	2.1

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created. Elders Pond, a 150 acre natural pond located upstream, severely reduces summer flow to Mill Pond.

Remarks: The dam is an earth fill structure. The downstream slope is faced with stone; the upstream slope is partially faced with stone. The spillway is a concrete drop inlet with flashboards on the downstream end. Concrete in the spillway is broken and badly spalled. There is seepage through the downstream face of the dam. Large trees are growing on the dam.

Ownership and Use: Ownership and use of the site are not known.

****

EXISTING SITE TA-5315

Location: On Hathaway Brook about 350 feet upstream from Highland Street in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°49'00" Longitude: 70°58'25"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
*	7	250	0.4

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop inlet with flashboards. Trees and brush are growing on the dam.

Ownership and Use: The site is owned by Decas Brothers and is used by J. Egger to store water for use in cranberry bogs.

* The pond originally covered 24 acres; the surface area is now much less.

****

EXISTING SITE TA-5316

Location: In a wetland area about 3,500 feet north of Long Point Road in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°49'07" Longitude: 70°54'28"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
17	4	250	0.4

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created. The small drainage area limits expansion potential.

Remarks: The area appears to be a natural pond with water level controlled by sheet-steel, drop inlet spillway with flashboards and a concrete flume with flashboards.

Ownership and Use: The site is owned by Decas Brothers and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-5317 (Assawompset Pond)

Location: On the Nemasket River at the Lakeville - Middleborough town line in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°51'07" Longitude: 71°55'09"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
2600*	6	31,400	49.1

Potential for Expansion: Significant expansion does not appear practical. Roads and hundreds of houses line the shore of the ponds. The drainage area to pool area ratio is 8 to 1.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. The principal spillway is a 5 bay stone masonry drop structure with stop logs. The emergency spillway is composed of concrete cylinders capped with bituminous concrete. Trees and brush are growing on the dam. There is a fish ladder at the dam.

EXISTING SITE TA-5317 (continued)

Ownership and Use: The site is owned by the City of Taunton and is used as a water supply.

*Immediately upstream of Assawompset Pond are Little Quittacas Pond, Great Quittacas Pond and Long Pond. All ponds are interconnected and seem to have the same water level. The total surface area is 5,750 acres.

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EXISTING SITE TA-5318

Location: On an unnamed tributary to Shorts Brook about 1,500 feet north of the junction of Short and Tispaquin Streets in Middleborough, Mass.

Plympton, Mass. USGS quadrangle

Latitude: 41°54'10" Longitude: 70°51'17"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	7	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. There are three outlet structures. The principal spillway is a 2 bay concrete drop structure with flashboards. The other outlets are a canal with flashboards which supplies a lift pump; and another canal with a timber flume to control flow.

Ownership and Use: The site is owned by Kenneth Beaton and is used to store water for use in cranberry bogs.

****

EXISTING SITE TA-5319

Location: On an unnamed tributary to Black Brook about 1,000 feet upstream from the Penn-Central Railroad in Middleborough, Mass.

Snipatuit Pond, Mass. USGS quadrangle

Latitude: 41°50'13" Longitude: 70°51'14"

EXISTING SITE TA-5319 (continued)

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
70	3	1400	2.2

Potential for Expansion: Significant expansion does not appear feasible. A 4,000 foot long dike would be required to protect the railroad embankment along the southwest edge of the pond.

Remarks: The dam is an earth fill structure. There are three outlet structures: a timber drop inlet with flashboards and two timber flumes with flashboards. A small section of the dam appears to have been replaced after a washout.

Ownership and Use: The site is owned by L.B. Handy Co. and is used to store water for use in cranberry bogs.

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TA-5310

TA-5317
Assawompset Pond

TA-5311
Woods Pond

TA-5316

EXISTING RESERVOIRS
SUBWATERSHED TA-53
NEMASKET RIVER

LEGENO

SUBWATERSHEO BOUNOARY

ORAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING RESERVOIR OR PONO

LOCATION MAP

5303 5301 5306 5318 5311 5313 5317 5312 5319 5314 5315 5316 5308 5307 5310 5309

SOURCE: USGS QUAO SHEETS
ASSAWOMPSET PONO-1963
PLYMPTON-1962
NEW BEOFORO NORTH-1964
SNIPATUIT PONO-1962
BRIOGEWATER-1962

NEMASKET RIVER (TA-53)

TAUNTON RIVER STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-54, Mill River

The Mill River subwatershed covers about 25,300 acres in the municipalities of Foxborough, Sharon and Stoughton, in Norfolk County; and Easton, Mansfield, Norton, Raynham and Taunton, in Bristol County.

The Mill River flows southerly from Lake Sabbatia in Taunton to its confluence with the Taunton River. The major tributaries are: the Canoe River which originates in Sharon and flows southeasterly through Foxborough and Mansfield to Winnecunnet Pond in Norton; and Mulberry Meadow Brook which originates in Easton and flows southerly to Winnecunnet Pond in Norton. Elevations range from a high of about 370 feet in Sharon to a low of about 20 feet in Taunton. Geology of the subwatershed is characterized by granite or schist bedrock overlain by from 5 to 50 feet of sand and gravel outwash or englacial drift.

Five potential reservoir sites and 13 existing reservoirs were studied.

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POTENTIAL SITE TA-5401

Location: On an unnamed tributary to Poquanticut Brook about 7,300 feet upstream from the Bristol - Norfolk county line in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'23" Longitude: 71°09'27"

Facilities Affected: None below elevation 260

Geologic Conditions: Both abutments are thin discontinuous deposits of englacial drift with many massive outcrops of granite bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Water-holding capabilities appear to be good. Borrow material for dam construction was not located near the site.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock. An auxiliary dike will be needed above elevation 255.

Public Ownership: The dam site and pool area are owned by the Massachusetts Department of Natural Resources.

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POTENTIAL SITE TA-5404

Location: On an unnamed tributary to the Canoe River about 150 feet upstream from Newcomb Street in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°59'26" Longitude: 71°10'31"

Facilities Affected:

Facility	Elevation
6 houses	100
Building	100

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete drop-structure emergency spillway may be required at this site.

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POTENTIAL SITE TA-5405

Location: On the Canoe River about 100 feet upstream from Newland Street in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°59'43" Longitude: 71°09'37"

Facilities Affected:

Facility	Elevation
4 houses	110
2 buildings	110
Mill Street	110
5 houses	105
Barn	105
2 buildings	105
East Street	105
House	100
Pumping Station - wells	100
Norton Avenue	100
Maple Street	100
Newcomb Street	90

POTENTIAL SITE TA-5405 (continued)

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete drop-structure emergency spillway may be required at this site. An auxiliary dike will be needed above elevation 90.

Public Ownership: Thirty-eight acres within the potential pool area are owned by the Easton Water Department.

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POTENTIAL SITE TA-5406

Location: On the Canoe River about 1,600 feet upstream from Route 106 in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°02'13" Longitude: 71°11'39"

Facilities Affected:

Facility	Elevation
3 houses	150
Garage	150
Building	150
3 houses	140
Poultry business	140
Garage	140
Franklin Street	140
Mansfield Water Works	130

Geologic Conditions: The right abutment is outwash gravel with many cobbles. The left abutment has outwash gravel low on the slope and englacial drift at higher elevations. Depth to bedrock in the foundation is estimated to be from 25 to 30 feet. Waterholding capabilities appear to be poor; leakage is expected through the right abutment and low on the left abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 145.

Public Ownership: About fifty percent of the potential pool area is owned by the Mansfield Water Department.

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POTENTIAL SITE TA-5407

Location: On an unnamed tributary to the Canoe River about 2,200 feet upstream from Franklin Street in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°03'13" Longitude: 71°11'07"

Facilities Affected:

Facility	Elevation
Bird Road	200

Geologic Conditions: Both abutments are thin discontinuous deposits of englacial drift underlain by granite bedrock. Bedrock outcrops in many places on both abutments. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Waterholding capabilities appear to be good; there may be some leakage through a thin layer of gravel at the surface. Borrow material for dam construction was not located near the site.

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock. Three auxiliary dikes will be needed above elevation 195.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- MILL RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ** (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5401 DA= 0.61 SQ MI = 390 AC USGS QUAD-MANSFIELD LATITUDE 42-04-23 LONGITUDE 71-09-27																	
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 216 CFS																	
237.2	0	0.0		1		7.1	249.5	E	135	4.1	2690	253.0	38	256.9	27	51	*****
248.2	100	3.0	4360	21	20370	18.2	250.7	E	168	5.1	2590	254.7	46	258.2	28	58	0.14
249.7	138	4.1	3360	25	18300	19.7	252.2	E	219	6.6	2110	255.8	51	259.2	29	64	0.18
251.1	175	5.4	2830	30	16370	21.1	253.6	E	268	8.2	1850	256.2	52	259.2	29	63	0.21
252.2	213	6.5	2480	35	14950	22.2	254.7	E	320	9.8	1650	257.0	55	259.5	30	65	0.24
252.5	221	6.8	2400	36	14640	22.5	255.0	E	331	10.2	1610	257.2	56	259.7	30	66	0.24
SITE-TA-5404 DA= 1.15 SQ MI = 736 AC USGS QUAD-NORTON LATITUDE 41-59-26 LONGITUDE 71-10-31																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.00 IN, PEAK FLOW = 395 CFS																	
84.5	0	0.0		9		0.5	89.0	D	255	4.1	1700	91.3	137	94.6	11	8	*****
87.1	100	1.6	5020	63	7980	3.2	87.1	C	109	1.7	4600	91.5	140	94.6	11	8	0.16
88.1	170	2.8	3110	84	6320	4.1	88.1	D	179	2.9	2950	92.1	149	95.1	11	9	0.24
88.3	184	3.0	2910	86	6190	4.3	88.3	D	193	3.2	2770	92.1	150	95.1	11	9	0.26
SITE-TA-5405 DA= 14.29 SQ MI = 9146 AC USGS QUAD-NORTON LATITUDE 41-59-43 LONGITUDE 71-09-37																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.00 IN, PEAK FLOW = 2218 CFS																	
88.0	0	0.0		54		4.0	101.6	D	3163	4.1	590	105.1	537	109.6	26	94	*****
89.5	100	0.1	6500	76	8600	5.5	89.5	N	214	0.3	3030	96.1	254	102.1	18	24	0.21
94.8	854	1.1	1890	217	7460	10.8	94.8	N	969	1.2	1670	102.6	451	109.1	25	86	1.51
100.0	2363	3.0	990	365	6420	16.0	100.0	D	2477	3.3	950	105.0	530	109.6	26	94	3.30
102.5	3397	4.5	970	448	7360	18.5	102.5	D	3511	4.6	940	106.1	570	109.8	26	95	4.32

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-MILL RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV + TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5406 DA= 6.75 SQ MI = 4320 AC USGS QUAD-MANSFIELD LATITUDE 42-02-13 LONGITUDE 71-11-39																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 1550 CFS																
125.5	0	0.0		28		3.5	143.0 T	1494	4.1	900	146.8	179	149.8	28	61	*****
128.1	100	0.3	8370	48	17280	6.1	128.1 T	154	0.4	5440	134.5	84	137.5	15	18	0.21
132.5	374	1.0	2640	75	13180	10.5	132.5 T	428	1.2	2300	138.8	104	141.8	20	30	0.68
138.7	922	2.5	1420	103	12650	16.7	138.7 T	976	2.7	1340	144.8	159	147.8	26	51	1.35
142.5	1374	3.8	1080	135	10960	20.5	142.5 T	1428	4.0	1040	147.3	184	150.3	28	66	1.84
SITE-TA-5407 DA= 1.29 SQ MI = 826 AC USGS QUAD-MANSFIELD LATITUDE 42-03-13 LONGITUDE 71-11-07																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 458 CFS																
182.3	0	0.0		8		2.3	192.6 E	286	4.1	1560	195.8	73	199.3	19	28	*****
188.0	100	1.5	4530	27	16620	8.0	190.5 E	191	2.8	2370	195.3	70	199.3	19	28	0.17
189.8	153	2.2	3340	33	15340	9.8	192.3 E	266	3.9	1910	196.2	76	199.5	20	29	0.23
191.1	206	3.0	2700	42	13360	11.1	193.6 E	339	4.9	1640	197.0	81	199.8	20	31	0.29
192.3	258	3.8	2410	50	12580	12.3	194.8 E	415	6.0	1500	197.3	84	199.8	20	31	0.35
192.5	268	3.9	2330	51	12310	12.5	195.0 E	427	6.1	1460	197.6	85	199.8	20	31	0.36

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5408 (Beaumont Pond)

Location: On the Canoe River about 700 feet upstream from the Bristol - Norfolk county line in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°03'06" Longitude: 71°11'54"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
0*	12	1950	3.1

Potential for Expansion: It appears that a 25 acre pond could be built at the site without affecting any facilities.

Remarks: The dam is an earth fill structure that has been breached.

Ownership: The site is owned by Charles Wheeler.

* Original surface area was about 10 acres.

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EXISTING SITE TA-5409 (Whiteville Pond)

Location: On an unnamed tributary to the Canoe River about 250 feet upstream from Franklin Street in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°02'22" Longitude: 71°11'13"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
16	6	900	1.4

Potential for Expansion: Pool area could be doubled. Several houses would be affected. A 1,000 foot long dam would be needed.

Remarks: The dam is an earth fill structure which appears to be built around an old mill. The downstream slope is faced with stone. The spillway consists of rocks and boulders dumped into the stream channel. Trees are growing on the fill.

Ownership and Use: The site is owned by Mr. Zaffini and is used primarily for recreation.

****

EXISTING SITE TA-5411 (Puds Pond)

Location: On an unnamed tributary to Poquanticut Brook about 1,000 feet upstream from Leach Pond on the Sharon - Easton town line.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'10" Longitude: 71°08'52"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	13	550	0.9

Potential for Expansion: Significant expansion does not appear practical. Topography will not permit a larger surface area.

Remarks: The dam is an earth fill structure. The upstream slope is faced with concrete; the downstream slope faced with stone. The spillway is a parabolic-shaped concrete apron with flashboards. There is also a concrete drop structure with flashboards that acts as a pond drain. Concrete in the outlet channel of the apron spillway has cracked. There is excessive leakage around the flashboard channels.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources.

****

EXISTING SITE TA-5412

Location: On Poquanticut Brook about 500 feet upstream from Leach Pond in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'08" Longitude: 71°09'22"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
25	7	1150	1.8

Potential for Expansion: Significant expansion does not appear practical. Topography limits any significant expansion in surface area.

Remarks: The dam is an earth fill structure. The spillway is a low 3 bay concrete drop structure with flashboards. The dam is constructed of gravelly material and seepage occurs along the downstream toe. Small trees are growing on both slopes.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

****

EXISTING SITE TA-5413 (Leach Pond)

Location: On Poquanticut Brook about 400 feet downstream from the Sharon - Easton town line in Easton, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°03'48" Longitude: 71°09'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
110	7	1600	2.5

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to lack of high abutments.

Remarks: The dam is an earth fill structure. The principal spillway is a concrete flume with flashboards. The emergency spillway is a cobble channel with a flashboard inlet control.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

****

EXISTING SITE TA-5414 (New Pond)

Location: On Poquanticut Brook about 50 feet upstream from Routes 106 and 123 in Easton, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°01'26" Longitude: 71°08'16"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Aq. Mi.)
18	15	3400	5.3

Potential for Expansion: The surface area could be doubled. About 6 houses and Routes 106 and 123 would be affected. Any additional expansion would require long dikes and would create large areas of shallow water.

Remarks: The dam is an earth fill structure. Upstream and downstream slopes are faced with stone. The spillway is a concrete flume with two bays of flashboards. There are trees growing on the dam. There is seepage where the dam passes over an old canal and near the spillway.

Ownership and Use: The site is owned by the C.I. Fuller Estate and is used primarily for recreation.

****

EXISTINGS SITE TA-5415 (Old Pond)

Location: On Beaver Brook about 200 feet upstream from Route 106 in Easton, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°01'29" Longitude: 71°07'58"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
9	11	1450	2.3

Potential for Expansion: The water level could be increased about 6 feet and the surface area nearly tripled. Several houses would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is rip-rapped. The spillway is a two bay concrete drop structure with flashboards. There are large trees growing on the dam. Concrete in the spillway is cracked and spalled. Water is seeping around the spillway headwall and undermining the stone sidewalls of the outlet channel.

Ownership and Use: The site is owned by W.C. Hanscom and is used primarily for recreation.

****

EXISTING SITE TA-5416 (Watson Pond)

Location: On an unnamed tributary to the Mill River at Bay Street in Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°56'53" Longitude: 71°06'51"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
70	7	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: Watson Pond is a natural pond. The Bay Street concrete box culvert has a raised headwall and a flashboard to raise the original water level.

Ownership and Use: The site is owned by the Massachusetts Department of Natural Resources and is used for recreation.

****

EXISTING SITE TA-5417 (Lake Sabbatia)

Location: On the Mill River at Bay Street in Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°56'02" Longitude: 71°06'50"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
255	12	23,550	36.8

Potential for Expansion: Significant expansion does not appear practical. Many cottages line the shore. Expansion would affect the Hockomock Swamp.

Remarks: The dam is an earth fill structure with Bay Street across the top. Upstream and downstream slopes are faced with stone. The spillway is a concrete drop structure with multi-bay flashboard gates outletting to the concrete box culvert under Bay Street. There are small trees growing on the downstream slope.

Ownership and Use: The site is owned by Whittenton Mill and is used primarily for recreation.

****

EXISTING SITE TA-5418

Location: On the Mill River about 300 feet upstream from Whittenton Street in Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°55'26" Longitude: 71°06'24"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	14	23,850	37.3

Potential for Expansion: Significant expansion does not appear practical. There is a large mill complex on the left abutment. Cottages around Lake Sabbatia, located immediately upstream, would also be affected.

Remarks: The dam is a concrete gravity structure. Multi-bay sets of flashboards were built on top of the gravity dam to raise the water level.

Ownership and Use: The site is owned by Whittenton Mill and is used to store water.

****

EXISTING SITE TA-5419 (Ward Pond)

Location: On Mulberry Brook about 3,700 feet upstream from the Easton - Norton town line in Easton, Mass.

Brockton, Mass. USGS quadrangle

Latitude: 42°00'20" Longitude: 71°07'27"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	4	5500	8.6

Potential for Expansion: The pond area could be quadrupled. A camping area would be affected.

Remarks: The dam is an earth fill structure. It appears that the slopes were originally faced with stone which has now deteriorated. The spillway is a two bay concrete flume with flashboards. Concrete in the spillway is cracked, spalled, and broken. Trees and brush are growing on the fill.

Ownership and Use: The site is owned by the Easton Conservation Commission and is used for recreation.

****

EXISTING SITE TA-5420

Location: On Mulberry Meadow Brook about 750 feet upstream from the Easton - Norton town line in Easton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°59'55" Longitude: 71°07'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
40	7	6050	9.5

Potential for Expansion: The surface area could be doubled. A much longer dam would be needed. Ward Pond, Site TA-5419, would be affected along with a camping area and cranberry bogs.

Remarks: The dam is an earth fill structure. There are 4 outlet structures. The principal spillway is a 3 bay timber flume with flashboards. The other outlets are a concrete drop inlet with flashboards; a 3 bay timber flume with flashboards; and a single bay timber flume with flashboards. There are trees and stumps on the dam. The single bay timber flume is deteriorating and leaking.

Ownership and Use: The site is owned by Robert Hammond and is used to store water for use in cranberry bogs.

****

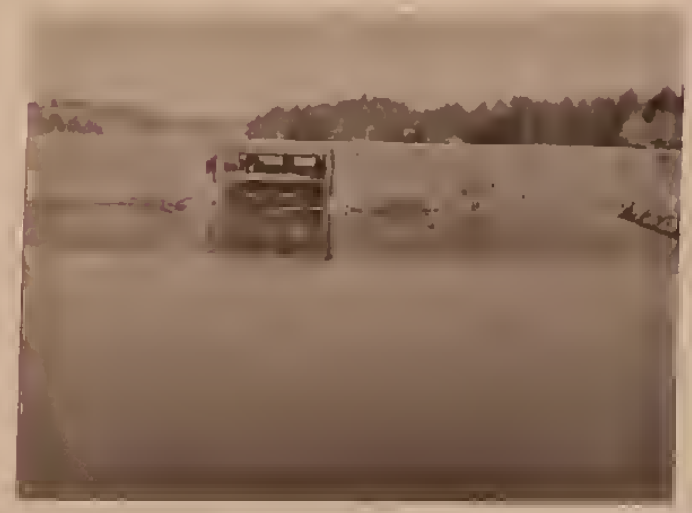
TA-5409
Whiteville Pond

TA-5415
Old Pond

TA-5412

TA-5417
Lake Sabbatia

TA-5414
New Pond



TA-5420

EXISTING RESERVOIRS
SUBWATERSHED TA-54
MILL RIVER

USDA SCS-HYATTSVILLE MD. 1973

5411
5401
5412
5413
5407
5408
5409
5406
5415
5414
5419
5420
5405
5404
5416
5417
5418

LEGEND

WATERSHED BOUNDARY

DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING POND OR RESERVOIR

SOURCE: USGS QUAD SHEETS
TAUNTON-1962
NORTON-1964
MANSFIELD-1964
BROCKTON-1963

MILL RIVER (TA-54)

TAUNTON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1979

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-55, Rumford River

The Rumford River subwatershed covers about 42,300 acres in the municipalities of Foxborough, Plainville, Sharon and Wrentham, in Norfolk County; and Attleboro, Mansfield, North Attleborough, Norton and Rehoboth, in Bristol County. There are two USGS stream gaging stations on the Wading River in Mansfield and in Norton.

The Rumford River originates in Sharon and flows southerly through Foxborough, Mansfield and Norton. The major tributary is the Wading River which originates in Wrentham and flows southeasterly through Foxborough and Mansfield to the confluence with the Rumford River in Norton. Elevations range from a high of about 490 feet on Bluff Hill in Sharon to a low of about 60 feet in Norton. Geology is characterized by granitic bedrock overlain by from 15 to 50 feet of outwash sand and gravel or englacial drift.

Twelve potential reservoir sites and 22 existing reservoirs were studied.

****

POTENTIAL SITE TA-5501

Location: On the Rumford River about 3,000 feet upstream from Cocasset Street in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'14" Longitude: 71°12'46"

Facilities Affected:

Facility	Elevation
2 houses	245
2 barns	245
Building	245
Furnace Street	240
House	230
House	220
2 cabins	220
Barn	220
Gavins Pond	219
Cabin	215
Pumping Station	215
Cabin	210

POTENTIAL SITE TA-5501 (continued)

Geologic Conditions: The left abutment is granitic bedrock high on the slope with glacial till at lower elevations. The right abutment is poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 35 to 40 feet. Waterholding capabilities appear to be fair; leakage is expected through the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Waterholding capabilities might be improved by a cut-off through the sand and gravel on the right abutment. An auxiliary dike will be needed above elevation 228. A housing development may be constructed in the pool area in the near future. See Existing Site TA-5501 for data on Gavins Pond which is within the potential pool area.

****

POTENTIAL SITE TA-5502

Location: On Billings Brook about 3,000 feet upstream from the Sharon - Foxborough town line in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°05'10" Longitude: 71°12'37"

Facilities Affected:

Facility	Elevation
Power line poles	230
Power line towers	230

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to granitic bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. A sand and gravel company is excavating material from the right abutment.

****

POTENTIAL SITE TA-5503

Location: On an unnamed tributary to Billings Brook about 2,200 feet downstream from Wolomolopoag Street in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°05'25" Longitude: 71°12'50"

Facilities Affected:

Facility	Elevation
3 houses	260
Garage	260
Wolomolopoag Street	260

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to granitic bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. A sand and gravel company is excavating material from the right abutment.

****

POTENTIAL SITE TA-5504

Location: On Old Mill Brook about 550 feet upstream from George Street in Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°01'28" Longitude: 71°19'53"

Facilities Affected:

Facility	Elevation
George Street	260

Geologic Conditions: The left abutment is poorly graded sand and gravel outwash with granitic bedrock outcrops high on the slope. The right abutment is sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

Public Ownership: Small portions of the Wrentham State Forest are within the potential pool area.

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POTENTIAL SITE TA-5506

Location: On Wading River about 4,000 feet upstream from West Street in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°02'40" Longitude: 71°16'00"

Facilities Affected:

Facility	Elevation
House	210
Mill Street	210
House	205
Pumping Station Road	185

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash with granitic bedrock outcrops high on the right abutment. Depth to bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 188.

Public Ownership: Portions of the Foxboro State Forest are located within the potential pool area.

****

POTENTIAL SITE TA-5507

Location: On the Rumford River about 100 feet downstream from the Foxborough-Sharon town line in Foxborough and Sharon, Mass. The site is at the Gavins Pond Dam.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'45" Longitude: 71°12'45"

Facilities Affected:

Facility	Elevation
Furnace Street	240
House	230

Geologic Conditions: The left abutment is poorly graded sand and gravel outwash at low elevations with thin glacial till underlain by bedrock at higher elevations. The right abutment is outwash sand and gravel. Depth to granitic bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through the right abutment and the foundation. Borrow material for dam construction was located near the site.

POTENTIAL SITE TA-5507 (continued)

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. It appears that the right abutment may be excavated and a housing development built on the abutment and into the potential pool area. See Existing Site TA-5507 for data on Gavins Pond.

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POTENTIAL SITE TA-5508

Location: On Chartley Brook about 1,700 feet upstream from Wilmarth Street in Attleboro, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°55'06" Longitude: 71°14'19"

Facilities Affected:

Facility	Elevation
3 houses	130

Geologic Conditions: The right abutment is thin poorly graded sand and gravel outwash underlain by glacial till and bedrock. The left abutment is glacial till underlain by bedrock. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be good; there may be some leakage through the right abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-5509

Location: On an unnamed tributary to the Rumford River about 200 feet upstream from Spring Street in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°02'43" Longitude: 71°13'29"

Facilities Affected:

Facility	Elevation
House	180
Barn	180
Belcher Street	180

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash with cobbles and boulders. Depth to granitic bedrock in the foundation is estimated to be from 20 to 30 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete, monolithic conduit, emergency spillway may be required at this site. A town dump is located in the upper portion of the watershed.

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POTENTIAL SITE TA-5511

Location: On the main tributary to the Wading River about 1,300 feet upstream from Granite Street in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°03'54" Longitude: 71°15'46"

Facilities Affected: None below elevation 260.

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash with boulders. Depth to granitic bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. An old, breached stone dam is located just upstream of the potential dam site.

Public Ownership: A large portion of the pool area is owned by the Foxborough Conservation Commission.

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POTENTIAL SITE TA-5515

Location: On Hawthorne Brook about 200 feet upstream from Interstate 495 in Wrentham, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°02'18" Longitude: 71°19'34"

Facilities Affected:

Facility	Elevation
3 houses	290
Farm	290
Beech Street	290
House	285
3 barns	285
Taunton Street	285

Geologic Conditions: Both abutments are granitic bedrock overlain by thin discontinuous sand and gravel. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 285.

Public Ownership: Much of the potential pool area and the dam site is within the Wrentham State Forest.

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POTENTIAL SITE TA-5516

Location: On the Wading River about 2,000 feet downstream from Williams Street in Mansfield, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°00'22" Longitude: 71°15'42"

Facilities Affected:

Facility	Elevation
15 houses	160
Garage	160
Barn	160
6 buildings	160
Cedar Street	160
11 houses	155
2 garages	155
2 buildings	155
Williams Street	155
Robinson Pond	150
West Street	150
House	145

POTENTIAL SITE TA-5516 (continued)

Geologic Conditions: The left abutment is thin deposits of poorly graded gravel underlain by bedded silt and sand, lacustrine deposits. The right abutment is thin poorly graded sand and gravel outwash underlain by granitic bedrock. Bedrock outcrops in the foundation. Waterholding capabilities appear to be good; some leakage is expected through the gravel on the left abutment.

Engineering Notes: Preliminary design information indicates that a concrete drop structure emergency spillway may be required at this site. An auxiliary dike will be required above elevation 155.

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POTENTIAL SITE TA-5517

Location: On the Wading River at Williams Street in Mansfield, Mass. The site is at the Robinson Pond Dam.

Wrentham, Mass. USGS quadrangle

Latitude: 42°00'42" Longitude: 71°15'46"

Facilities Affected:

Facility	Elevation
7 houses	160
Garage	160
3 buildings	160
Cedar Street	160
4 houses	155
West Street	155
Williams Street	150

Geologic Conditions: Both abutments are shallow poorly graded sand and gravel outwash underlain by granitic bedrock. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be fair; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete drop structure emergency spillway may be required at this site. See Existing Site TA-5517 for data on Robinson Pond.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- RUMFORD RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5501 DA= 4.09 SQ MI = 2618 AC USGS QUAD- MANSFIELD LATITUDE 42-04-14 LONGITUDE 71-12-46																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 1474 CFS																
205.2	0	0.0		18		3.3	220.2 E	905	4.1	1440	227.2	174	235.2	33	156	*****
209.0	100	0.5	12280	37	33130	7.0	211.5 E	245	1.1	5010	221.5	115	228.6	27	96	0.20
218.5	701	3.2	2330	90	18070	16.5	218.5 N	734	3.4	2230	231.2	216	240.2	38	218	0.97
227.6	1904	8.7	1020	178	10910	25.6	230.1 E	2406	11.0	810	235.8	268	242.2	40	245	1.96
235.7	3708	17.0	680	266	9430	33.7	238.2 E	4443	20.4	560	242.2	336	247.7	46	340	2.86
SITE- TA-5502 DA= 3.24 SQ MI = 2074 AC USGS QUAD- MANSFIELD LATITUDE 42-05-10 LONGITUDE 71-12-37																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 1168 CFS																
222.7	0	0.0		17		2.8	237.2 E	922	5.3	820	239.7	125	242.7	23	12	*****
226.3	100	0.6	7570	39	19610	6.4	238.8 E	1104	6.4	690	241.2	137	244.7	25	14	0.18
231.8	408	2.4	2110	73	11730	11.8	240.3 E	1297	7.5	660	242.8	149	245.8	26	16	0.61
235.5	716	4.1	1340	97	9850	15.5	242.0 E	1516	8.8	630	244.5	162	247.2	27	18	0.94
238.3	1025	5.9	1050	116	9250	18.4	244.8 E	1962	11.3	550	247.1	182	249.8	30	22	1.18
SITE- TA-5503 DA= 1.37 SQ MI = 877 AC USGS QUAD- MANSFIELD LATITUDE 42-05-25 LONGITUDE 71-12-50																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 388 CFS																
233.7	0	0.0		6		3.6	249.3 E	303	4.1	2300	251.8	78	253.7	24	41	*****
241.8	100	1.4	6640	19	35160	11.8	244.3 E	164	2.2	4060	246.7	27	248.2	18	24	0.17
245.5	181	2.5	4160	25	29740	15.5	248.0 E	260	3.5	2890	250.3	42	251.7	22	35	0.27
248.3	262	3.5	3280	30	28320	18.4	250.8 E	378	5.1	2270	253.3	112	255.0	25	46	0.35
251.8	423	5.8	2490	77	13680	21.9	254.3 E	705	9.7	1490	256.7	190	259.5	29	66	0.49
252.5	476	6.5	2290	92	11840	22.5	255.0 E	794	10.8	1370	257.0	198	259.7	30	67	0.53

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER — SUBWATERSHED- RUMFORD RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5504 DA= 0.82 SQ MI = 525 AC USGS QUAD- WRENTHAM LATITUDE 42-01-28 LONGITUDE 71-19-53																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.40 IN, PEAK FLOW = 300 CFS																
231.8	0	0.0		6		1.9	241.1 E	181	4.1	1100	243.5	37	246.1	16	7	*****
238.3	100	2.3	2860	25	11540	8.3	240.8 E	177	4.0	1620	243.2	37	245.0	15	7	0.15
242.6	225	5.1	1380	35	8860	12.6	245.1 E	326	7.5	950	247.5	46	249.6	20	12	0.27
248.5	474	10.8	960	48	9470	18.5	251.0 E	610	13.8	750	253.5	64	255.8	26	32	0.45
252.5	686	15.7	960	60	10910	22.5	255.0 E	854	19.5	770	257.2	77	259.7	30	57	0.55
SITE- TA-5506 DA= 3.16 SQ MI = 2022 AC USGS QUAD- WRENTHAM LATITUDE 42-02-40 LONGITUDE 71-16-00																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 708 CFS																
189.3	100	0.6	11900	23	51030	11.3	191.8 E	188	1.1	6330	202.3	41	209.3	31	127	0.18
192.7	188	1.1	7300	28	48910	14.7	195.2 E	287	1.7	4780	202.8	41	207.7	30	111	0.33
198.3	364	2.2	4990	35	52280	20.2	200.8 E	480	2.8	3780	206.1	47	209.2	31	126	0.56
202.5	521	3.0	4540	41	57900	24.5	202.5 T	546	3.2	4330	207.7	50	209.7	32	130	0.73
SITE- TA-5507 DA= 3.68 SQ MI = 2355 AC USGS QUAD- MANSFIELD LATITUDE 42-04-45 LONGITUDE 71-12-45																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.30 IN, PEAK FLOW = 1327 CFS																
215.5	0	0.0		10		5.5	234.8 E	1315	6.6	770	237.2	163	241.6	32	41	*****
229.2	608	3.0	1970	95	12590	19.2	237.7 E	1745	8.8	690	240.1	186	243.7	34	48	0.85
237.1	1624	8.3	880	161	8860	27.0	243.6 E	2874	14.6	500	245.7	228	249.8	40	73	1.70
240.0	2132	10.8	740	186	8460	30.0	244.5 E	3077	15.7	510	246.8	237	249.8	40	73	2.01

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER — SUBWATERSHED- RUMFORD RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5508 DA= 0.97 SQ MI = 621 AC — USGS QUAD- NORTON — LATITUDE 41-55-06 LONGITUDE 71-14-19																
SITE RATING (2) — STREAM WATER QUALITY (B) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.00 IN, PEAK FLOW = 314 CFS																
115.3	0	0.0		7		1.2	122.3 E	215	4.1	820	124.6	95	127.1	13	10	*****
120.1	100	1.9	2320	36	6520	6.1	122.6 E	243	4.6	950	125.1	102	127.1	13	11	0.16
121.3	153	3.0	1910	51	5700	7.3	123.8 E	331	6.4	880	126.3	118	128.8	15	15	0.21
122.3	207	4.0	1640	64	5300	8.3	124.8 E	419	8.1	810	127.0	128	130.1	16	18	0.27
SITE- TA-5509 DA= 0.63 SQ MI = 403 AC — USGS QUAD- MANSFIELD — LATITUDE 42-02-43 LONGITUDE 71-13-29																
SITE RATING (3) — STREAM WATER QUALITY (B) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.30 IN, PEAK FLOW = 227 CFS																
172.8	0	0.0		5		0.8	178.8 E	139	4.1	1700	181.6	50	187.5	15	9	*****
177.8	100	3.0	2960	35	8530	5.9	177.8 E	105	3.0	2820	182.2	51	187.8	16	10	0.14
179.2	151	4.5	2120	42	7570	7.1	179.2 E	156	4.6	2060	183.3	54	188.8	17	11	0.18
180.3	202	6.0	1690	48	7140	8.3	180.3 E	207	6.1	1650	184.3	56	189.8	18	12	0.23
SITE- TA-5511 DA= 1.62 SQ MI = 1037 AC — USGS QUAD- WRENTHAM — LATITUDE 42-03-54 LONGITUDE 71-15-46																
SITE RATING (3) — STREAM WATER QUALITY (B) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.30 IN, PEAK FLOW = 414 CFS																
244.2	0	0.0		10		2.2	255.1 E	359	4.1	980	257.4	50	259.7	18	15	*****
248.8	100	1.2	3670	32	11520	6.8	251.3 E	203	2.3	1810	253.7	44	255.8	14	9	0.18
250.2	140	1.6	2730	37	10350	8.2	252.7 E	252	2.9	1520	255.1	46	257.2	15	11	0.23
251.2	181	2.0	2220	39	10270	9.2	253.7 E	296	3.4	1350	256.1	48	258.2	16	12	0.28
252.2	221	2.5	1880	41	10190	10.2	254.7 E	342	4.0	1220	257.1	50	259.2	17	14	0.32
252.5	232	2.7	1810	41	10170	10.5	255.0 E	354	4.1	1190	257.4	50	259.5	17	14	0.33

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- RUMFORD RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5515 DA= 0.78 SQ MI = 499 AC USGS QUAD- WRENTHAM LATITUDE 42-02-18 LONGITUDE 71-19-34																	
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.40 IN, PEAK FLOW = 286 CFS																	
268.4	0	0.0		3		4.4	277.2	E	173	4.1	1790	280.7	61	284.2	20	18	*****
275.4	100	2.4	4020	31	13150	11.3	277.9	E	198	4.8	2030	281.7	73	285.0	21	19	0.15
277.6	178	4.3	2710	41	11660	13.6	280.1	E	302	7.3	1600	283.1	89	286.2	22	22	0.23
279.2	255	6.1	2140	50	10980	15.2	281.7	E	413	9.8	1320	284.2	101	287.1	23	25	0.29
280.7	333	8.0	1810	61	9940	16.7	283.2	E	526	12.6	1150	285.0	110	287.9	24	28	0.35
SITE- TA-5516 DA= 19.46 SQ MI = 12454 AC USGS QUAD- WRENTHAM LATITUDE 42-00-22 LONGITUDE 71-15-42																	
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 3310 CFS																	
144.5	100	0.1	8360	54	15380	12.5	144.5	N	256	0.2	3270	150.6	127	156.3	24	64	0.23
148.3	366	0.4	4420	83	19480	16.2	148.3	D	521	0.5	3100	154.3	326	159.7	28	100	0.74
150.8	632	0.6	3090	139	14040	18.7	150.8	D	787	0.8	2480	155.5	391	159.8	28	102	1.20
152.5	949	0.8	2360	231	9680	20.5	152.5	D	1105	1.1	2020	156.3	437	159.8	28	104	1.74
SITE- TA-5517 DA= 18.95 SQ MI = 12128 AC USGS QUAD- WRENTHAM LATITUDE 42-00-42 LONGITUDE 71-15-46																	
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 3223 CFS																	
152.5	161	0.2	6760	142	7640	11.5	152.5	D	312	0.3	3480	156.3	324	160.0	19	23	0.35

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5507 (Gavins Pond)

Location: On the Rumford River at the Foxborough - Sharon town line in Sharon, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°04'45" Longitude: 71°12'45"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
18	9	2350	3.7

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-5507 for details.

Remarks: The dam is an earth fill structure. The upstream slope is faced with stone; the downstream slope is partially stone-faced. The principal spillway is a two bay concrete flume with flashboards. There is also an old mill race with flashboards which outlets under a building. Large trees are growing on the dam. The dam has apparently been overtopped. The embankment near the principal spillway is eroded and there has been undermining and cracking of the concrete structure.

Ownership and Use: The site is owned by Simione Sand and Gravel and is used to store water.

****

EXISTING SITE TA-5512 (Furnace Lake)

Location: On the Wading River about 600 feet upstream from Mill Street in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°02'51" Longitude: 71°15'37"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
17	8	1800	2.8

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-5512 for details.

Remarks: The outlet structures form the dam. The spillway system consists of a concrete flume with flashboards, a masonry and concrete drop structure and another concrete and masonry drop structure which serves as an emergency spillway. There is some seepage through the downstream face of the emergency spillway structure.

EXISTING SITE TA-5512 (continued)

Ownership and Use: The site is owned by Ray Realty, Inc. and is used to store water.

****

EXISTING SITE TA-5513 (Carpenter Pond)

Location: On an unnamed tributary to the Wading River at Lakeview Road in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°04'10" Longitude: 71°16'13"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
30	15	800	1.3

Potential for Expansion: The surface area could be nearly doubled. Several houses and Route 140 would be affected.

Remarks: The dam is an earth fill structure with Lakeview Road running across the top. The principal spillway is a concrete drop inlet with flashboards and pipe conduit. A steel pipe culvert serves as a secondary outlet.

Ownership and Use: The site is owned by the Foxborough Conservation Commission and is used to store water.

****

EXISTING SITE TA-5517 (Robinson Pond)

Location: On the Wading River at Williams Street in Mansfield, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°00'42" Longitude: 71°15'46"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
4	8	12,150	19.0

Potential for Expansion: The site appears to have potential for expansion. See Potential Site TA-5517 for details.

Remarks: The dam is an earth fill structure with Williams Street across the top. The slopes appear to have been faced with stone and later covered with gravel. There are three spillways. The principal spillway is a timber drop inlet to a concrete box culvert. The other spillways are concrete flumes with timber gates that were apparently used in a mill operation. Both timber gates leak.

Ownership and Use: Ownership and use is not known.

****

EXISTING SITE TA-5518 (Vandy's Pond)

Location: On the Rumford River about 700 feet upstream from Cocasset Street in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°03'44" Longitude: 71°12'50"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	8	3200	5.0

Potential for Expansion: Enlarging the dam at this location would affect several roads and a cemetery. Potential Site TA-5501, located about 2,500 feet upstream, seems to be a more economical site.

Remarks: The dam is an earth fill structure. The principal spillway is a concrete drop structure. There is also a gate structure which is inoperable and leaks. Trees are growing on the dam. There is erosion near the principal spillway; possibly due to overtopping of the embankment.

Ownership and Use: The site is owned by Frank Vanderburghe and is used to store water.

****

EXISTING SITE TA-5519
(Glue Factory Pond)

Location: On the Rumford River west of Morse Street in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°02'45" Longitude: 71°12'51"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	Not Known	4000	6.3

Potential for Expansion: Significant expansion does not appear practical. Topography is not suitable for a higher dam due to the lack of high abutments. Potential Site TA-5510, located about 3,000 feet upstream, offers more potential.

Remarks: The dam is built against a mill building with a single land paved road between the mill and the upstream concrete face of the dam. The spillway system consists of 4 concrete drop inlets which outlet under the mill building. Concrete in the upstream face and the outlet structures is spalled and cracked.

Ownership and Use: The site is owned by Eugene Farrell and is used to store water for factory use.

****

EXISTING SITE TA-5520 (Fulton Pond)

Location: On the Rumford River about 350 feet upstream from West Street in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°01'29" Longitude: 71°13'14"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
0*	10	7100	11.1

Potential for Expansion: The pond could be rebuilt to its original 9 acre size. Any further expansion would affect houses and streets which surround the pond.

Remarks: The dam is an earth fill structure which has been breached.

Ownership: The site is owned by the Town of Mansfield.

* The original pool area was about 9 acres.

****

EXISTING SITE TA-5521 (Kingman Pond)

Location: On the Rumford River about 450 feet upstream from Spring Street in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°01'12" Longitude: 71°13'07"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
0*	8	7150	11.2

Potential for Expansion: The pond could be rebuilt to its original 9 acre size. Any further expansion would affect houses and streets which surround the pond.

Remarks: The dam is an earth fill structure which has been breached.

Ownership: The site is owned by the Town of Mansfield.

* The original pool area was about 9 acres.

****

EXISTING SITE TA-5522 (Cabot Pond)

Location: On the Rumford River at Willow Street in Mansfield, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°00'44" Longitude: 71°13'18"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
0*	7	7700	12.1

Potential for Expansion: A 10 acre pond appears feasible. A 500 foot long dam would be required.

Remarks: The dam is an earth fill structure with Willow Street along the top. The pond level is no longer maintained and all flow passes through the pipe arch culvert under Willow Street.

Ownership: The site is owned by Peter Provost.

* The original pool area was about 5 acres.

****

EXISTING SITE TA-5523
(Barrowsville Pond)

Location: On the Wading River at Barrows Street in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°56'51" Longitude: 71°12'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
45	11	24,000	37.5

Potential for Expansion: Significant expansion does not appear practical. Topography limits a higher dam due to the lack of high abutments.

Remarks: The dam is an earth fill structure with stone masonry facing on the upstream slope. The principal spillway is a 6 bay concrete drop structure with flashboards. There is also a concrete flume with a timber gate used to drain the pond. Concrete in the flume is cracked and spalled, and leakage occurs through the downstream wingwall. There is also an inlet and penstock to control water flow to the factory.

Ownership and Use: The site is owned by Defiance Manufacturing Company and is used to store water for factory use.

****

EXISTING SITE TA-5524 (Chartley Pond)

Location: On Chartley Brook at North Worcester Street in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°56'59" Longitude: 71°13'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
75	11	4350	6.8

Potential for Expansion: Significant expansion does not appear practical. Route 123, Worcester Street, Union Street, and the Penn-Central Railroad would be affected. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure with North Worcester Street across the top. A concrete wall forms the upstream face of the dam. There are two outlets. One is a gated inlet controlled from a mill located downstream. The other outlet is a drop inlet with flashboards.

Ownership and Use: The site is owned by Sinclair Manufacturing and is used to store water for factory use.

****

EXISTING SITE TA-5525 (Coopers Pond)

Location: On an unnamed tributary to Chartley Brook at the Penn-Central Railroad in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°56'46" Longitude: 71°15'14"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
12	19	1300	2.0

Potential for Expansion: Significant expansion does not appear practical. Expansion would affect Route 123 and a housing development.

Remarks: The dam is an earth fill structure with Penn-Central Railroad tracks across the top. The spillway is a concrete and stone masonry drop inlet with flashboards. The fill material is sand and gravel. Water depth is less than 2 feet. Trees and brush are growing on the embankment.

Ownership and Use: The site is owned by the Penn-Central Railroad and is used to store water.

****

EXISTING SITE TA-5526 (Turnpike Lake)

Location: On Hawthorne Brook in the triangle formed by Routes 1, 106, and 152 in Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°01'07" Longitude: 71°18'39"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
120	7	3000	4.7

Potential for Expansion: Significant expansion does not appear practical. Expansion would affect U.S. Route 1 and several streets.

Remarks: The dam is an earth fill structure. The principal spillway is a concrete and stone masonry flume with flashboards. The original flashboard channels are badly spalled and water level is controlled by flashboards in the downstream headwall. Trees and brush are growing on the dam. Erosion has occurred around the downstream spillway headwall.

Ownership and Use: The site is owned by George Goddard and is used primarily for recreation.

****

EXISTING SITE TA-5527 (Crocker Pond)

Location: On an unnamed tributary to the Wading River about 100 feet upstream from Myrtle Street in Wrentham, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°03'54" Longitude: 71°17'44"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
18	7	1800	2.8

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The left downstream slope is faced with stone. The spillway is a concrete flume with flashboards. Trees are growing on the dam. Concrete in the spillway is cracked and the structure is undermined. There appears to be piping under the spillway left sidewall. There is seepage through or under the right side of the dam.

Ownership and Use: The site is owned by the City of Attleboro and is used to store water.

****

EXISTING SITE TA-5528
(Rabbit Hill Pond)

Location: On an unnamed tributary to Lake Mirimichi about 600 feet upstream from Belcher Street in Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°02'25" Longitude: 71°17'59"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	11	2800	4.4

Potential for Expansion: Significant expansion does not appear practical. Topography does not permit a significant increase in surface area.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop structure with flashboards. Sidewalls are concrete block construction.

Ownership and Use: The site is owned by the Wrentham Sportsman's Club and is used for recreation.

****

EXISTING SITE TA-5529 (Lake Mirimichi)

Location: On an unnamed tributary to the Wading River north of Route 106 in Foxborough and Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°01'36" Longitude: 71°17'07"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
170	11	7750	12.1

Potential for Expansion: Significant expansion does not appear practical. Many cottages which line the shore would be affected. Topography does not permit a significant increase in surface area.

Remarks: The dam is an earth fill structure with partial riprap on the upstream slope. The principal spillway is a concrete ogee weir. There is also a gated outlet. Erosion is occurring near the principal spillway.

Ownership and Use: The site is owned by Warren Allen and is used for recreation.

****

EXISTING SITE TA-5530

Location: On an unnamed tributary to the Wading River about 500 feet upstream from Carpenter Pond in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°04'08" Longitude: 71°16'37"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
18	8	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. Riprap and stone facing cover most of the embankment slopes. The outlet is over stones in a washed-out section of the dam. A stone lined channel located at the right side of the dam appears to have been the original outlet. Trees are growing on the dam.

Ownership and Use: The site is owned by Rexford Bristol and is used to store water.

****

EXISTING SITE TA-5531 (Sunset Lake)

Location: On an unnamed tributary to the Wading River at Granite Street in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°03'33" Longitude: 71°15'49"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	8	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure with Granite Street across the top. The downstream slope is partially faced with stone masonry. The spillway is a concrete drop inlet with flashboards and a concrete box culvert. Large trees are growing on the dam.

Ownership and Use: The site is owned by Rexford Bristol and is used to store water.

****

EXISTING SITE TA-5532 (Cocasset Lake)

Location: On an unnamed tributary to the Wading River at Water Street in Foxborough, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°03'20" Longitude: 71°15'35"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
35	15	1500	2.3

Potential for Expansion: Significant expansion does not appear practical. The lake is surrounded by streets and houses which would be affected.

Remarks: The dam is an earth fill structure with Water Street across the top. The upstream and downstream slopes are faced with stone masonry. There are two stone masonry drop inlets with flashboards.

Ownership and Use: The site is owned by Wyatt Harper and is used to store water.

****

EXISTING SITE TA-5533 (Hersey Pond)

Location: On Robinson Brook about 150 feet upstream from Walnut Street in Foxborough, Mass.

Mansfield, Mass. USGS quadrangle

Latitude: 42°03'00" Longitude: 71°14'34"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	7	950	1.5

Potential for Expansion: Significant expansion does not appear practical. A newly constructed portion of Route 140 would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. The downstream slope is faced with stone. The spillway is a concrete drop structure with flashboards. There is seepage under the dam. The principal spillway has moved from its constructed location and is undermined. Concrete is broken. An interchange between Route 140 and Interstate 95 has been built through the pool area.

Ownership and Use: The site is owned by the Massachusetts Department of Mental Health and is used to store water.

****

EXISTING SITE TA-5534 (Sweet Pond)

Location: On the Wading River at Otis Street in Mansfield, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°59'21" Longitude: 71°15'19"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	9	13,150	20.5

Potential for Expansion: The pool area could be greatly enlarged. Facilities affected would include Attleboro water supply reservoirs and Balcolm Street. A much longer dam would be needed.

Remarks: The dam is an earth fill structure with Otis Street across the top. The downstream slope is partially faced with stone. The principal spillway is a multi-bay concrete drop structure and a highway bridge. There is also a channel with flashboards to provide water to a factory. Concrete in the bridge sidewalls and wingwalls is cracked, spalled, and undermined.

EXISTING SITE TA-5534 (continued)

Ownership and Use: The site is owned by Charles Richardson, Inc. and is utilized for factory power.

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EXISTING SITE TA-5535

(Norton Reservoir)

Location: On the Rumford River about 350 feet upstream from Reservoir Avenue in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°59'07" Longitude: 71°11'22"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
545	14	12,300	19.2

Potential for Expansion: Significant expansion does not appear practical. About 100 houses and twenty streets would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is rip-rapped. The spillway is a concrete gravity section with an adjacent concrete weir emergency spillway. Concrete is cracked and spalled. There is slight erosion on the downstream slope of the dam.

Ownership and Use: The site is owned by Wading River Reservoir Company and is utilized for factory use.

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TA-5512
Furnace Lake

TA-5519
Glue Factory Pond

TA-5513
Carpenter Pond

TA-5523
Barrowsville Pond

TA-5518
Vandy's Pond

TA-5524
Chartley Pond

EXISTING RESERVOIRS
SUBWATERSHED TA-55
RUMFORD RIVER

USDI SCS-UPPATTSVILLE, MD 1973

TA-5527
Crocker Pond

TA-5533
Hersey Pond

TA-5528
Rabbit Hill Pond

TA-5534
Sweet Pond

TA-5532
Cocasset Lake

TA-5535
Norton Reservoir

EXISTING RESERVOIRS
SUBWATERSHED TA-55
RUMFORD RIVER

USDA SCS-HYATTSVILLE MD 1975

LEGEND

- WATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

5503 5502 5507 5501 5518 5533 5519 5509 5512 552D 5521 5522 5535 5523 5524 5525 5508 5534 5516 5517 5526 5529 5504 5515 5528 5506 5532 5527 5530 5513 5531 5511

NORTON RESERVOIR

SOURCE - USGS QUAD. SHEETS
ATTLEBORD - 1964
MANSFIELD - 1964
NORTON - 1964
WRENTHAM - 1964

RUMFORD RIVER (TA-55)

TAUNTON RIVER STUDY AREA
MASSACHUSETTS
EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-56, Threemile River

The Threemile River subwatershed covers about 14,200 acres in the municipalities of Dighton, Norton, Rehoboth and Taunton, all in Bristol County. There is a USGS stream gaging station in North Dighton.

The Threemile River originates in Norton and flows southerly through Taunton to its confluence with the Taunton River at the Taunton - Dighton - Berkley boundary. The major tributary is Meadow Brook which originates in Norton and flows northeasterly to the confluence with the Threemile River. The Taunton River forms the southeastern study area boundary. Elevations range from a high of about 190 feet in Rehoboth to a low of about 10 feet in Taunton. Geology of the subwatershed is characterized by conglomerate or schist bedrock overlain by from 20 to 25 feet of glacial till.

One potential reservoir site and three existing reservoirs were studied.

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POTENTIAL SITE TA-5601

Location: On Meadow Brook about 150 feet upstream from Hodges Street in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°55'13" Longitude: 71°11'08"

Facilities Affected: None below elevation 100.

Geologic Conditions: Both abutments are glacial till with cobbles and boulders. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV + TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5601 DA= 1.50 SQ MI = 960 AC USGS QUAD- NORTON LATITUDE 41-55-13 LONGITUDE 71-11-08																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.90 IN, PEAK FLOW = 289 CFS																
82.4	0	0.0		6		4.4	95.4 E	332	4.1	1150	97.6	82	99.8	22	39	*****
90.1	100	1.2	3130	21	15150	12.2	92.6 E	192	2.4	1630	95.0	60	96.4	18	21	0.17
91.4	133	1.7	2800	30	12240	13.3	93.9 E	247	3.0	1510	96.3	71	97.8	20	27	0.21
92.5	172	2.2	2470	40	10700	14.5	95.0 E	310	3.9	1370	97.4	80	98.9	21	33	0.26

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5604

(Meadow Brook Pond)

Location: On Meadow Brook at Route 140 in Norton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°56'16" Longitude: 71°09'37"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
11	26	2400	3.8

Potential for Expansion: Significant expansion does not appear practical. A long dike to protect the Penn-Central Railroad track would be required.

Remarks: The dam is an earth fill structure with Route 140 across the top. A single lane unpaved road forms a downstream berm. The spillway is a concrete drop structure with flashboards and a concrete box culvert. The Penn-Central Railroad passes under Route 140 just north of the pond and would act as an emergency spillway.

Ownership and Use: The site is owned by Wading River Reservoir Company and is used to store water for factory use.

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EXISTING SITE TA-5605

Location: On the Threemile River about 2,900 feet upstream from Route 140 in Taunton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°54'53" Longitude: 71°08'17"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
65	13	47,800	74.7

Potential for Expansion: The pool area could be tripled. Three streets and several houses would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. The spillway is a concrete gravity section with provision for flashboards. There is also a gatehouse which can be used to lower the pond level.

Ownership and Use: The site is owned by Wading River Reservoir Company and is used to store water for factory use.

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EXISTING SITE TA-5606

Location: On the Threemile River about 1,500 feet upstream from Warner Boulevard in Dighton and Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°52'04" Longitude: 71°07'47"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
50	10	52,900	82.7

Potential for Expansion: It appears possible to triple the surface area. Route 44, two streets, and several houses would be affected. The Raytheon Plant located near the dam-site would also be affected.

Remarks: The dam is a long, concrete drop structure. Several gate structures control flow to the nearby Raytheon Plant. Concrete in the drop structure is cracked and spalled. Concrete in the sidewalls is badly spalled.

Ownership and Use: The site is owned by Wading River Reservoir Company and is used to store water for factory use.

****

TA-5604
Meadow Brook Pond

TA-5605

TA-5606

EXISTING RESERVOIRS
SUBWATERSHED TA-56
THREEMILE RIVER

USDA-SCS-HYATTSVILLE, MD. 1973

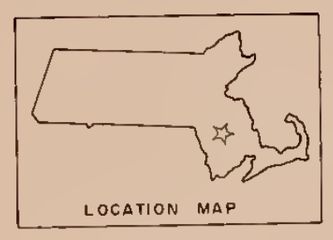
LEGEND

SUBWATERSHED BOUNDARY

DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING RESERVOIR OR POND



5601

5604

5605

5606

71° 10' 00"

71° 07' 30"

41° 55' 00"

41° 52' 30"

TAUNTON

Oakland

Westville

North Dighton

Weir Village

Meadow Brook Pond

Willis Lake

Three Mile River

Taunton River

N

SOURCE: USGS QUAD SHEETS
NORTON- 1964
TAUNTON- 1962
ASSONET- 1963

TAUNTON RIVER (TA-56)

TAUNTON RIVER STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1978

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-57, Taunton River

This portion of the Taunton River subwatershed covers about 25,000 acres in the municipalities of Berkley, Dighton, Rehoboth, Somerset and Taunton, all in Bristol County. There is a USGS stream gaging station on the Segreganset River in Dighton.

This study area is divided by the Taunton River which flows southerly along the Taunton - Berkley and Dighton - Berkley boundaries. Major tributaries are: the Cotley River which originates in Berkley and flows northerly to its confluence with the Taunton River; and the Segreganset River which originates in Taunton and flows generally southeasterly to its confluence with the Taunton River in Dighton. Elevations range from a high of about 240 feet in Rehoboth to sea level in Somerset. Geology of the subwatershed is characterized by conglomerate or schist bedrock overlain by from 15 to 40 feet of outwash sand and gravel or glacial till.

Six potential reservoir sites and two existing reservoirs were studied.

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POTENTIAL SITE TA-5701

Location: On the Segreganset River about 400 feet upstream from Maple Street in Dighton, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°51'31" Longitude: 71°09'57"

Facilities Affected:

Facility	Elevation
19 houses	100
3 garages	100
3 barns	100
Shed	100
Swimming pool	100
Cemetery	100
3 commercial buildings	100
Burt Street	100
Glebe Street	100
25 houses	95
7 garages	95
2 sheds	95
5 commercial buildings	95
14 houses	90
Shed	90
Cemetery	90
Route 44	90
Gulliver Street	90
Unnamed road	90
6 houses	85
2 sheds	85
House	80
Wheeler Street	80

POTENTIAL SITE TA-5701 (continued)

Geologic Condition: The left abutment is poorly graded sand and gravel outwash. The right abutment is a swamp with gray schist outcrops high on the slope. Depth to bedrock in the foundation is estimated to be from 35 to 40 feet. Waterholding capabilities appear to be poor; leakage is expected through the left abutment and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. This site was identified as a potential site (Site NAR-57-2) in the North Atlantic Regional Water Resources Study.

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POTENTIAL SITE TA-5702

Location: On Muddy Cove Brook about 200 feet downstream from Main Street in Dighton, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°49'04" Longitude: 71°08'15"

Facilities Affected:

Facility	Elevation
House	55
3 garages	55
Greenhouse	55
Cemetery	55
12 houses	50
6 garages	50
2 barns	50
Dairy business	50
3 commercial greenhouses	50
Commercial building	50
3 houses	45
Garage	45
3 sheds	45
Main Street	45

Geologic Conditions: The right abutment is glacial till underlain by bedrock. The left abutment is poorly graded sand and gravel outwash. Depth to conglomerate bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through the left abutment and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete chute emergency spillway may be required at this site.

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POTENTIAL SITE TA-5703

Location: On the Segreganset River about 350 feet upstream from Williams Street in Dighton, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°50'40" Longitude: 71°09'33"

Facilities Affected:

Facility	Elevation
14 houses	90
Shed	90
Cemetery	90
Gulliver Street	90
Route 44	90
6 houses	85
2 sheds	85
Mobile home	85
2 houses	80
Wheeler Street	80
Maple Street	80
Horton Street	75
Golf course club house	70

Geologic Conditions: The left abutment is poorly graded sand and gravel outwash. The right abutment is poorly graded sand and gravel outwash low on the slope with glacial till at higher elevations. Depth to schist or conglomerate bedrock is estimated to be from 25 to 30 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Borrow material for dam construction was located near the site.

Engineering Notes: Preliminary design information indicates that a concrete chute emergency spillway may be required at this site.

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POTENTIAL SITE TA-5704

Location: On an unnamed tributary to the Taunton River about 1,200 feet upstream from Berkley Street in Berkley, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°49'52" Longitude: 71°06'13"

POTENTIAL SITE TA-5704 (continued)

Facilities Affected:

Facility	Elevation
2 houses	50
Shed	50
2 houses	40
Garage	40
Shed	40
Elm Street	40
Bayview Avenue	40
House	35
Kennel	35
3 houses	30
Gas pipeline	25

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 35 to 40 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE TA-5705

Location: On the Cotley River about 200 feet upstream from County Road in Taunton, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°51'49" Longitude: 71°02'49"

Facilities Affected:

Facility	Elevation
Macomber Street	60
Trout Pond (Commercial)	55
Penn-Central Railroad	55
Cotley Street	55

Geologic Conditions: The right abutment is poorly graded sand and gravel outwash. The left abutment is gray schist bedrock overlain by thin discontinuous sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 15 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through the right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

POTENTIAL SITE TA-5705 (continued)

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in rock. This site was identified as a potential site (Site NAR-57-1) in the North Atlantic Regional Water Resources Study.

Public Ownership: About 8 acres within the potential pool area are owned by the Veterans of Foreign Wars (VFW).

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POTENTIAL SITE TA-5706

Location: On the Segreganset River about 1,200 feet downstream from Glebe Street in Taunton, Mass.

Norton, Mass. USGS quadrangle

Latitude: 41°53'34" Longitude: 71°10'40"

Facilities Affected:

Facility	Elevation
7 houses	110
Shed	110
Swimming pool	110
2 houses	105
Garage	105
Shed	105
Glebe Street	100

Geologic Conditions: The left abutment is poorly graded sand low on the slope with silty sand at higher elevations. The right abutment is poorly graded sand low on the slope with thin silty sand underlain by bedrock at higher elevations. Depth to bedrock in the foundation is estimated to be from 20 to 30 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 110.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5701 DA= 6.03 SQ MI = 3859 AC USGS QUAD- SOMERSET LATITUDE 41-51-31 LONGITUDE 71-09-57																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.90 IN, PEAK FLOW = 1521 CFS																	
72.8	0	0.0		29		2.8	89.4	E	2246	7.0	1330	91.8	344	96.9	27	123	*****
81.1	619	1.9	6080	124	30360	11.2	91.6	E	2954	9.2	1270	93.8	423	100.0	30	156	0.98
87.1	1658	5.1	2780	224	20560	17.2	93.6	E	3689	11.5	1250	96.1	512	101.4	31	173	2.00
92.6	3216	10.0	1780	376	15220	22.6	97.1	E	5358	16.7	1070	98.8	621	103.5	33	199	3.16
SITE- TA-5702 DA= 2.53 SQ MI = 1619 AC USGS QUAD- SOMERSET LATITUDE 41-49-04 LONGITUDE 71-08-15																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 665 CFS																	
41.5	0	0.0		11		7.5	52.8	C	560	4.1	2570	56.0	191	59.9	26	69	*****
45.9	100	0.7	13040	34	38140	11.8	45.9	D	120	0.8	10840	53.6	137	58.0	24	55	0.18
48.9	225	1.7	7020	50	31570	14.8	48.9	C	245	1.7	6440	55.5	178	59.5	26	67	0.37
50.9	350	2.5	4830	75	22570	16.9	50.9	C	370	2.7	4560	56.0	190	59.5	26	67	0.50
52.5	499	3.6	3550	111	15930	18.5	52.5	C	520	3.9	3410	56.8	206	59.9	26	69	0.67
SITE- TA-5703 DA= 8.44 SQ MI = 5402 AC USGS QUAD- SOMERSET LATITUDE 41-50-40 LONGITUDE 71-09-33																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.80 IN, PEAK FLOW = 1913 CFS																	
64.6	0	0.0		42		2.5	76.0	C	1868	4.1	1580	81.6	484	88.8	27	131	*****
66.4	100	0.2	19290	71	27350	4.4	66.4	N	168	0.4	11520	75.1	289	80.1	18	46	0.21
73.0	984	2.2	3380	221	15040	11.0	73.0	N	1051	2.3	3170	83.6	538	91.6	30	176	1.50
78.6	2751	6.1	1470	399	10130	16.7	78.6	C	2818	6.3	1440	86.3	610	92.4	30	188	3.14
84.1	5402	12.0	960	554	9330	22.2	84.1	C	5469	12.2	940	90.5	733	95.6	34	253	4.87

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED- TAUNTON RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY					DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- TA-5704 DA= 1.06 SQ MI = 678 AC USGS QUAD- ASSONET LATITUDE 41-49-52 LONGITUDE 71-06-13																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 326 CFS																	
13.6	0	0.0		4		3.5	29.5	E	235	4.1	3180	32.0	31	34.0	24	43	*****
23.4	100	1.7	6820	16	41780	13.3	25.9	E	153	2.7	4450	28.4	23	30.0	20	27	0.16
30.2	243	4.3	4000	26	37940	20.2	32.8	E	326	5.8	2990	35.2	40	36.7	27	57	0.31
38.0	530	9.3	3020	49	32700	28.0	40.5	E	673	11.8	2380	42.9	66	44.9	35	113	0.53
42.5	788	13.8	2340	65	28450	32.5	45.0	E	969	17.1	1900	47.4	84	49.8	40	157	0.67
SITE- TA-5705 DA= 4.71 SQ MI = 3014 AC USGS QUAD- ASSONET LATITUDE 41-51-49 LONGITUDE 71-02-49																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 825 CFS																	
44.0	0	0.0		31		2.0	53.0	E	1042	4.1	920	56.3	376	59.6	18	35	*****
46.3	100	0.4	8350	63	13360	4.3	48.8	E	342	1.4	2440	55.0	321	59.0	17	32	0.20
49.0	342	1.4	2970	105	9710	7.1	51.5	E	732	2.9	1390	56.3	375	59.8	18	35	0.58
51.0	585	2.3	2100	157	7820	9.0	53.5	E	1139	4.5	1080	57.0	405	60.0	18	36	0.87
52.5	870	3.5	1760	220	6970	10.5	55.0	E	1592	6.3	960	57.5	430	59.9	18	36	1.19
SITE- TA-5706 DA= 1.38 SQ MI = 883 AC USGS QUAD- NORTON LATITUDE 41-53-34 LONGITUDE 71-10-40																	
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.90 IN, PEAK FLOW = 466 CFS																	
92.3	0	0.0		8		2.3	101.8	E	305	4.1	1520	104.1	153	106.6	17	28	*****
97.6	100	1.4	4350	28	15280	7.6	100.1	E	200	2.7	2180	102.6	112	104.3	14	17	0.17
100.5	203	2.8	3330	50	13600	10.5	103.0	E	428	5.8	1580	105.3	184	107.6	18	34	0.29
101.9	305	4.1	3270	91	11010	11.8	104.3	E	632	8.6	1580	106.3	214	109.3	19	48	0.40
102.5	361	4.9	3070	106	10470	12.5	105.0	E	727	9.8	1530	106.6	221	109.6	20	50	0.43

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5707 (Barstows Pond)

Location: On the Cotley River about 100 feet upstream from Hart Street in Taunton, Mass.

Taunton, Mass. USGS quadrangle

Latitude: 41°52'55" Longitude: 71°02'55"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
9	6	4350	6.8

Potential for Expansion: The pond depth could be increased by about five feet without affecting facilities. Any further increase would affect the Penn-Central Railroad and Route 24.

Remarks: The dam is an earth fill structure with a railroad tie core along the centerline. The principal spillway is a multi-bay wood drop structure with timber bracing and slanting flashboards. There is also a timber drop structure which may have been used to power a saw mill. Trees are growing on the downstream slope of the dam.

Ownership and Use: The site is owned by Anthony Silva and is used to store water.

****

EXISTING SITE TA-5708

Location: On Muddy Cove Brook about 100 feet upstream from Elm Street in Dighton, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°48'48" Longitude: 71°07'46"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
25	30	1800	2.8

Potential for Expansion: Raising the pool level by 10 feet would affect Main Street and several houses. Any further expansion above 10 feet will affect a cemetery. Topography limits any significant increase in surface area.

Remarks: The dam is an earth fill structure with a concrete core wall. The upstream slope is partially riprapped. The principal spillway is a stepped concrete chute structure. A narrow emergency spillway is located at the right abutment.

Ownership and Use: The site is owned by ICI of America and is used to store water for factory use.

****

TA-5707
Barstows Pond

TA-5708

EXISTING RESERVOIRS
SUBWATERSHED TA-57
TAUNTON RIVER

USDA-SCS-HYATTSVILLE MD. 1973

LEGEND

SUBWATERSHED BOUNDARY

DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING RESERVOIR OR POND

LOCATION MAP

5706

5701

5703

5707

5705

5702

5704

5708

N

SOURCE: USGS QUAD SHEETS
SOMERSET- 1967
TAUNTON- 1962
ASSONET- 1963
NORTON- 1964

TAUNTON RIVER (TA-57)

TAUNTON RIVER STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

TAUNTON STUDY AREA
SITE DATA FOR

Subwatershed TA-58, Assonet River

The Assonet River subwatershed covers about 22,500 acres in the municipalities of Berkley, Fall River, Freetown and Taunton, in Bristol County, and Lakeville in Plymouth County.

The Assonet River flows southwesterly from Cedar Swamp in Lakeville, through Freetown, to its confluence with the Taunton River in Fall River. The Assonet River is subject to tidal effects from the Taunton River upstream to the village of Assonet. The major tributaries are: Quaker Brook which originates in Berkley and flows southerly to the confluence with the Assonet River in Lakeville; and Rattlesnake Brook which originates as Mill Brook in Fall River and flows northwesterly to the confluence with the Assonet River in Freetown. Elevations range from a high of about 320 feet in Fall River to sea level, also in Fall River. Geology of the subwatershed is characterized by conglomerate, schist, or granitic bedrock, overlain by from 10 to 60 feet of outwash sand and gravel or englacial drift.

Seven potential reservoir sites and four existing reservoirs were studied.

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POTENTIAL SITE TA-5802

Location: On an unnamed tributary to the Cedar Swamp River about 3,100 feet downstream from Slab Bridge Road in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°46'51" Longitude: 71°01'40"

Facilities Affected:

Facility	Elevation
House	160
Mobile home	160
Shed	160
House	155
Greenhouse	155
5 houses	150
Slab Bridge Road	150
2 houses	145
2 sheds	145
Kennel	145
Business building	145
Gas pipeline	140

POTENTIAL SITE TA-5802 (continued)

Geologic Conditions: The left abutment is poorly graded sand and gravel outwash. The right abutment is glacial till or englacial drift. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be fair; leakage is expected through the left abutment. Borrow material for dam construction was located near the site.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Three auxiliary dikes will be needed above elevation 155.

Public Ownership: About 45 acres of the Freetown - Fall River State Forest and 15 acres of land owned by the Freetown Conservation Commission lie within the potential pool area.

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POTENTIAL SITE TA-5803

Location: On an unnamed tributary to the Cedar Swamp River about 1,200 feet upstream from Mill Street in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°48'15" Longitude: 71°01'29"

Facilities Affected:

Facility	Elevation
House	100

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. The left abutment has granitic bedrock at shallow depths. Depth to bedrock in the foundation is estimated to be from 15 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 95.

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POTENTIAL SITE TA-5804

Location: On Rattlesnake Brook about 3,300 feet upstream from Route 24 and the Penn-Central Railroad in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°46'03" Longitude: 71°05'12"

Facilities Affected:

Facility	Elevation
Bell Rock Road	130

Geologic Conditions: The right abutment is poorly graded fine sand and gravel outwash. The left abutment is thin discontinuous englacial drift underlain by granitic bedrock. Depth to bedrock in the foundation is estimated to be from 10 to 20 feet. Waterholding capabilities appear to be fair; leakage is expected through the right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway will probably be excavated in bedrock.

Public Ownership: The entire site lies within the Freetown - Fall River State Forest.

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POTENTIAL SITE TA-5805

Location: On Rattlesnake Brook about 500 feet upstream from Route 24 and the Penn-Central Railroad in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°46'28" Longitude: 71°05'09"

Facilities Affected: None below elevation 90.

Geologic Conditions: The right abutment is poorly graded sand and gravel outwash. The left abutment is thin poorly graded sand and gravel underlain by bedrock. Depth to granitic bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be fair; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete chute emergency spillway may be required at this site.

Public Ownership: The entire site lies within the Freetown - Fall River State Forest.

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POTENTIAL SITE TA-5806

Location: On Rattlesnake Brook about 500 feet upstream from the Fall River - Freetown boundary in Fall River, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°45'27" Longitude: 71°04'54"

Facilities Affected:

Facility	Elevation
Bell Rock Road	130

Geologic Conditions: The right abutment is poorly graded sand and gravel outwash. The left abutment is granitic bedrock. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be poor; leakage is expected through the right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway will probably be excavated in bedrock. This site was also identified as a potential site (Site NAR-58-1) in the North Atlantic Regional Water Resources Study.

Public Ownership: The site and about 95% of the potential pool area are within the Freetown - Fall River State Forest.

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POTENTIAL SITE TA-5807

Location: On Quaker Brook about 2,100 feet downstream from the Berkley - Freetown town line in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°48'41" Longitude: 71°03'05"

Facilities Affected:

Facility	Elevation
House	55
3 mobile homes	55
Shed	55
Seymour Street	55
2 Mobile homes	50
Barn	50
Bryant Street	50
Berkley Town Dump	50

POTENTIAL SITE TA-5807 (continued)

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to schist or conglomerate bedrock in the foundation is estimated to be from 40 to 45 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Auxiliary dikes will be needed at elevation 50 and 55.

****

POTENTIAL SITE TA-5809

Location: On Holloway Brook about 550 feet upstream from Pickens Street in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°49'38" Longitude: 70°59'29"

Facilities Affected:

Facility	Elevation
Route 140	105
House	95
Mobile home	95

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 50 to 60 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 105.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-ASSONET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ TYPE (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5802 DA= 3.31 SQ MI = 2118 AC USGS QUAD-ASSONET LATITUDE 41-46-51 LONGITUDE 71-01-40																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.50 IN, PEAK FLOW = 632 CFS																
124.8	0	0.0		16		2.8	137.8 E	733	4.1	780	140.3	112	142.1	20	42	*****
128.6	100	0.6	6720	37	17990	6.6	139.1 E	863	4.9	780	141.5	126	143.6	22	48	0.18
137.8	719	4.1	1310	96	9810	15.8	142.3 E	1257	7.1	750	144.8	162	146.7	25	64	0.95
147.0	1957	11.1	730	184	7790	25.0	149.5 E	2475	14.0	580	151.8	243	154.1	32	116	1.83
152.5	3147	17.7	580	250	7340	30.5	155.0 E	3840	21.7	480	157.2	314	160.0	38	174	2.37
SITE-TA-5803 DA= 5.77 SQ MI = 3693 AC USGS QUAD-ASSONET LATITUDE 41-48-15 LONGITUDE 71-01-29																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 959 CFS																
82.1	217	0.7	3060	30	22450	22.2	84.6 E	344	1.1	1930	87.1	42	90.0	30	63	0.40
88.5	451	1.5	1860	46	18360	28.5	91.0 E	621	2.0	1350	93.4	58	96.1	36	98	0.75
92.5	657	2.0	1480	56	17500	32.5	95.0 E	849	2.8	1150	97.4	67	100.0	40	129	1.00
SITE-TA-5804 DA= 3.80 SQ MI = 2432 AC USGS QUAD-ASSONET LATITUDE 41-46-03 LONGITUDE 71-05-12																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.50 IN, PEAK FLOW = 1173 CFS																
75.0	0	0.0		11		5.0	97.0 E	841	4.1	670	105.6	135	114.1	44	111	*****
81.0	100	0.5	4670	23	19900	11.0	83.5 E	195	1.0	2390	94.4	59	101.9	32	48	0.18
98.8	928	4.6	890	72	11460	28.7	98.8 N	958	4.6	860	112.3	200	122.1	52	176	1.17
111.3	2583	12.7	420	193	5630	41.4	113.8 E	3124	15.3	350	119.3	258	125.6	56	209	2.26
121.8	5067	25.0	380	288	6680	51.8	124.3 E	5856	28.9	330	126.8	357	129.8	60	257	3.10

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER SUBWATERSHED-ASSONET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	PERCENT CHANCE (MGD)
SITE-TA-5805 DA= 4.06 SQ MI = 2598 AC USGS QUAD-ASSONET LATITUDE 41-46-28 LONGITUDE 71-05-09																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.50 IN, PEAK FLOW = 1079 CFS																
51.6	0	0.0		5		15.7	83.1 T	899	4.1	1060	87.4	86	90.4	54	145	*****
62.9	100	0.5	6360	14	44100	26.9	62.9 T	132	0.6	4800	69.3	24	72.3	36	51	0.20
70.4	249	1.2	3110	26	29510	34.4	70.4 T	282	1.2	2750	76.6	48	79.6	44	79	0.43
78.1	548	2.5	1720	52	18090	42.0	78.1 T	581	2.7	1630	84.1	74	87.1	51	116	0.80
82.5	816	3.8	1240	68	14890	46.5	82.5 T	848	3.9	1190	87.5	86	90.5	54	147	1.09
SITE-TA-5806 DA= 3.13 SQ MI = 2003 AC USGS QUAD-ASSONET LATITUDE 41-45-27 LONGITUDE 71-04-54																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.50 IN, PEAK FLOW = 985 CFS																
101.1	0	0.0		9		9.2	115.3 E	897	5.4	510	117.8	134	121.0	29	51	*****
105.3	100	0.6	5110	41	12550	13.3	115.8 E	964	5.8	530	118.3	138	121.3	29	52	0.18
111.8	528	3.2	1160	89	6910	19.9	120.3 E	1568	9.3	390	122.8	176	127.3	35	82	0.73
119.3	1385	8.3	550	145	5260	27.2	123.8 E	2167	13.0	350	126.1	207	129.3	37	95	1.45
126.6	2671	16.0	360	210	4650	34.5	129.1 E	3246	19.4	300	131.5	281	134.3	42	133	2.12
SITE-TA-5807 DA= 3.01 SQ MI = 1926 AC USGS QUAD-ASSONET LATITUDE 41-48-41 LONGITUDE 71-03-05																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 810 CFS																
42.9	0	0.0		24		0.8	49.0 E	666	4.1	990	51.4	249	54.0	12	11	*****
44.9	100	0.6	7350	77	9510	2.9	49.4 E	744	4.6	990	51.8	258	54.4	12	12	0.18
46.4	244	1.5	3400	118	7020	4.4	48.9 E	650	4.1	1270	51.3	247	53.4	11	10	0.41
48.4	532	3.3	1860	172	5750	6.4	50.9 E	1072	6.6	920	53.3	293	55.8	14	15	0.73
49.9	819	5.1	1390	213	5350	7.8	52.4 E	1455	9.1	780	54.8	330	58.0	16	22	0.99
50.5	963	6.0	1280	228	5400	8.5	53.0 E	1633	10.2	750	55.4	343	58.8	17	25	1.11

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA-TAUNTON RIVER — SUBWATERSHED-ASSONET RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	STORAGE IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV ++ TYPE (MSL)	STORAGE AT CREST AC FT	STORAGE AT CREST IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-TA-5809 DA= 0.76 SQ MI = 486 AC USGS QUAD-ASSAWOMPSET LATITUDE 41-49-38 LONGITUDE 70-59-29																
SITE RATING (3) STREAM WATER QUALITY (8) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 238 CFS																
89.9	0	0.0		6		1.9	99.1 E	168	4.1	6070	101.5	37	103.6	16	41	*****
96.8	100	2.5	11690	23	51660	8.8	99.3 E	170	4.1	6870	101.8	38	103.5	16	40	0.15
98.6	148	3.6	9040	27	49210	10.7	101.1 E	232	5.6	5770	103.6	45	105.3	17	50	0.20
100.4	197	4.9	7580	32	46820	12.3	102.8 E	297	7.3	5030	105.1	52	107.1	19	61	0.24
102.5	275	6.8	6070	41	40760	14.5	105.0 E	397	9.8	4200	107.3	61	109.5	22	79	0.30

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE TA-5810

Location: On Terry Brook about 500 feet upstream from Route 24 in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°46'43" Longitude: 71°04'58"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
12	25	1450	2.3

Potential for Expansion: Significant expansion does not appear practical. The Penn-Central Railroad which runs through the pond area would be affected by any expansion.

Remarks: The dam is an earth fill structure. The principal spillway is a concrete and stone masonry chute with flashboard channels. Trees are growing on the dam. There are cracks in the spillway masonry sidewalls.

Ownership and Use: The site is owned by the City of Fall River and is used for recreation.

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EXISTING SITE TA-5811

Location: On an unnamed tributary to Cedar Swamp River about 3,800 feet upstream from Howland Road in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°47'17" Longitude: 71°01'40"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
53	7	3100	4.8

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The upstream slope is partially riprapped. The pool is very shallow with many stumps visible. There are five outlet structures. The principal spillway is a concrete flume with flashboards. Three outlets are prefabricated, sheet-steel, drop inlets with corrugated metal pipe outlets. The fifth structure is a concrete flume with flashboards.

Ownership and Use: The site is owned by Cranberry Corporation of America and is used to store water for use in cranberry bogs.

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EXISTING SITE TA-5812 (Forge Pond)

Location: On the Assonet River about 100 feet upstream from Forge Road in Freetown, Mass.

Assonet, Mass. USGS quadrangle

Latitude: 41°48'08" Longitude: 71°03'09"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
60	10	13,250	20.7

Potential for Expansion: Significant expansion does not appear feasible. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. The downstream slope is faced with stone. The spillway system consists of two concrete and stone masonry drop structures and a concrete flume. Concrete in the flume is cracked and spalled. Portions of the embankment adjacent to the spillways are frequently overtopped. There is a large quantity of seepage through the earth fill. A section of the dam is sand bagged.

Ownership and Use: The site is owned by Andre Fournier and is used for recreation.

****

EXISTING SITE TA-5813

Location: On Holloway Brook about 700 feet upstream from Kingman Street in Lakeville, Mass.

Assawompset Pond, Mass. USGS quadrangle

Latitude: 41°50'09" Longitude: 70°59'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
15	5	250	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure with a single-lane unimproved road across the top. The principal spillway is a concrete flume with flashboards and masonry wingwalls. A low area on the left edge of the dam acts as an emergency spillway.

Ownership and Use: The site is owned by Mr. St. Ives and is used to store water for use in cranberry bogs.

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TA-5810

TA-5811

TA-5812
Forge Pond

EXISTING RESERVOIRS
SUBWATERSHED TA-58
ASSONET RIVER

USDA-SCS-HYATTSVILLE, MD. 1979

5807

5813

5809

5812

5811

5803

5810

5802

5805

5804

5806

LEGEND

WATERSHED BOUNDARY

DRAINAGE AREA ABOVE STRUCTURE

POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE

EXISTING POND OR RESERVOIR

SOURCE-USGS QUAD. SHEETS
ASSAWOMPSET POND - 1963
ASSONET - 1963

LOCATION MAP

ASSONET RIVER (TA-58)

TAUNTON STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

NARRAGANSETT BAY STUDY AREA
SITE DATA FOR

Subwatershed NB-59, Palmer River

The Palmer River subwatershed covers about 32,200 acres in the municipalities of Dighton, Rehoboth, Seekonk, Somerset and Swansea, all in Bristol County. There is a USGS stream gaging station on the West Branch of the Palmer River in Rehoboth.

The Palmer River originates in Rehoboth and flows generally southwesterly through Swansea into the Warren River, a tidal inlet to Narragansett Bay. Major tributaries are: Bliss Brook which originates in Rehoboth and flows southerly to the confluence with the Palmer River; and Rocky Run which originates in Rehoboth and flows southwesterly to the confluence with the Palmer River. Elevations range from a high of 264 feet on Great Meadow Hill in Rehoboth to sea level in Swansea. Geology of the subwatershed is characterized by conglomerate bedrock overlain by from 10 to 80 feet of outwash sand and gravel or englacial drift.

Six potential reservoir sites and three existing reservoirs were studied.

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POTENTIAL SITE NB-5902

Location: On the Palmer River about 1,500 feet upstream from Williams Street in Rehoboth, Mass.
Somerset, Mass. USGS quadrangle
Latitude: 41°51'56" Longitude: 71°13'44"

Facilities Affected:

Facility	Elevation
7 houses	115
3 garages	115
Route 118	115
5 houses	110
Garage	110
House	105
Kennel	105
2 houses	100
2 garages	100
Gas pipline	100
Fairview Avenue	100
House	95
Garage	95

Geologic Conditions: The left abutment is poorly graded sand and gravel with cobbles and boulders and thin englacial drift underlain by bedrock. The right abutment is poorly graded sand and gravel outwash. Water-holding capabilities appear to be fair; leakage is expected through both abutments. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway will probably be partially excavated in rock. An auxiliary dike will be needed at the site.

POTENTIAL SITE NB-5902 (continued)

Public Ownership: A small portion of the Rehoboth State Forest is within the potential pool area above elevation 105.

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POTENTIAL SITE NB-5903

Location: On Bliss Brook about 700 feet upstream from Carpenter Street in Rehoboth, Mass.
East Providence, R.I. - Mass. USGS quadrangle
Latitude: 41°51'23" Longitude: 71°15'18"

Facilities Affected:

Facility	Elevation
5 houses	105
Apartment building	105
Garage	105
Homestead Avenue	105
2 houses	100
Perryville Road	100
Holmes Street	100
15 houses	95
5 garages	95
Golf clubhouse	95
Pro shop	95
Carpenter Street	95

Geologic Conditions: The right abutment is outwash sand and gravel at lower portions of the slope with conglomerate bedrock outcrops at higher elevations. The left abutment is thin outwash sand and gravel underlain by bedrock. Depth to bedrock in the foundation is estimated to be from 15 to 20 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete chute emergency spillway may be required at this site. An auxiliary dike will be needed at the site.

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POTENTIAL SITE NB-5906

Location: On the Palmer River about 700 feet upstream from Wheeler Street in Rehoboth, Mass.
East Providence, R.I. - Mass. USGS quadrangle
Latitude: 41°48'42" Longitude: 71°17'16"

Facilities Affected:

Facility	Elevation
5 houses	35
Golf course clubhouse	35
Route 44	35
River Street	35
Driving range	30
Pond Street	30
Danforth Street	30
Wilmarth Street	30
House	25
Dairy farm	25
Greenhouse	25
Garage	25
House	20

POTENTIAL SITE NB-5906 (continued)

Facility	Elevation
County Street	20
Miller Street	20
Summer Street	20

Geologic Conditions: The left abutment is poorly graded gravel high on the slope with poorly graded sand outwash at lower elevations. The right abutment is poorly graded sand and gravel outwash. Depth to conglomerate bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete drop structure emergency spillway may be required at this site.

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POTENTIAL SITE NB-5907

Location: On an unnamed tributary to the Palmer River about 400 feet upstream from Water Street in Rehoboth, Mass.
East Providence, R.I. - Mass. USGS quadrangle
Latitude: 41°48'30" Longitude: 71°16'15"

Facilities Affected:

Facility	Elevation
3 houses	30
Garage	30
Wood Street	30
Brook Street	20

Geologic Conditions: Both abutments are poorly graded fine sand and gravel outwash. Depth to conglomerate bedrock in the foundation is estimated to be from 40 to 50 feet. Waterholding capabilities appear to be fair; there may be some leakage through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 25.

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POTENTIAL SITE NB-5908

Location: On Rocky Run just upstream from Pleasant Street in Rehoboth, Mass.
Somerset, Mass. USGS quadrangle
Latitude: 41°46'47" Longitude: 71°14'23"

Facilities Affected:

Facility	Elevation
2 houses	50
Garage	50
Pleasant Street	50
Martin Street	50
House	45
House	40

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to conglomerate bedrock in the foundation is estimated to be from 70 to 80 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

POTENTIAL SITE NB-5908 (continued)

Engineering Notes: Preliminary design information indicates that a concrete drop structure or concrete chute emergency spillway may be required at this site.

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POTENTIAL SITE NB-5909

Location: On Rocky Run about 500 feet upstream from Martin Street in Rehoboth, Mass.
Somerset, Mass. USGS quadrangle
Latitude: 41°47'55" Longitude: 71°14'19"

Facilities Affected:

Facility	Elevation
11 houses	80
Garage	80
Cemetery	80
Gorham Street	80
Plain Street	80
16 houses	75
5 garages	75
5 houses	70
2 garages	70
Moulton Street	70
Chestnut Street	70
House	65
Garage	65
House	60
Pleasant Street	60

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 30 to 40 feet. Waterholding capabilities appear to be fair; leakage is expected through both abutments and the foundation. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED- PALMER RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE- NB-5902	DA= 5.26 SQ MI = 3366 AC		USGS QUAD- SOMERSET											LATITUDE 41-51-56		LONGITUDE 71-13-44	
SITE RATING (2)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 5.80 IN, PEAK FLOW = 1112 CFS					
77.5	0	0.0		15		5.5	100.0	E	1396	5.0	1090	102.4	195	105.3	33	178	*****
82.1	100	0.4	12200	29	41760	10.2	82.1	T	142	0.5	8590	95.1	93	99.0	27	103	0.20
93.0	644	2.3	2780	78	22850	21.0	103.5	E	2035	7.3	880	105.8	297	109.3	37	234	0.97
102.1	1733	6.1	1260	187	11680	30.0	106.6	E	2890	10.3	760	109.1	387	112.1	40	279	1.97
108.1	3366	12.0	900	361	8380	36.0	110.6	E	4446	15.7	680	113.0	603	116.5	45	358	3.03
SITE- NB-5903	DA= 7.70 SQ MI = 4928 AC		USGS QUAD- EAST PROVIDENCE											LATITUDE 41-51-23		LONGITUDE 71-15-18	
SITE RATING (3)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 5.80 IN, PEAK FLOW = 1432 CFS					
53.1	0	0.0		13		9.2	81.6	C	1704	4.1	1870	88.5	281	97.3	53	513	*****
59.0	100	0.2	27280	23	117610	15.1	59.0	N	162	0.4	16880	86.6	244	98.6	55	559	0.21
78.8	1247	3.0	2320	108	26840	34.8	78.8	N	1308	3.2	2210	87.0	252	93.6	50	405	1.75
90.1	3541	8.6	1420	313	16140	46.0	90.1	N	3602	8.8	1400	97.5	491	104.0	60	752	3.65
98.4	6981	17.0	960	513	13010	54.4	98.4	C	7043	17.2	950	103.3	649	108.1	64	933	5.38
SITE- NB-5906	DA= 30.50 SQ MI = 19520 AC		USGS QUAD- EAST PROVIDENCE											LATITUDE 41-48-42		LONGITUDE 71-17-16	
SITE RATING (3)	STREAM WATER QUALITY (B)		100-YR PRIN SPWY DESIGN STORM									RUNOFF = 5.80 IN, PEAK FLOW = 4515 CFS					
19.1	100	0.1	17110	130	13190	5.1	19.1	N	344	0.2	4970	25.7	453	32.3	18	29	0.36
24.7	1582	1.0	2220	402	8750	10.8	24.7	N	1826	1.1	1930	32.7	944	39.2	25	87	2.90
27.9	3064	1.9	1420	560	7770	13.8	27.9	D	3308	2.0	1320	34.0	1093	39.7	26	96	4.85
30.2	4546	2.8	1060	698	6930	16.2	30.2	D	4790	2.9	1010	35.0	1184	39.5	26	93	6.50

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED- PALMER RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	PERCENT CHANCE (MGD)
SITE- NB-5907 DA= 1.50 SQ MI = 960 AC USGS QUAD- EAST PROVIDENCE LATITUDE 41-48-30 LONGITUDE 71-16-15																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.80 IN, PEAK FLOW = 372 CFS																
11.3	0	0.0		9		3.3	19.7 E	332	4.1	1380	22.2	110	24.7	17	19	*****
15.5	100	1.2	4740	38	12540	7.5	18.0 E	226	2.8	2100	20.5	77	22.1	14	11	0.17
17.2	177	2.2	3190	50	11310	9.3	19.7 E	332	4.1	1690	22.2	110	24.1	16	17	0.27
19.9	330	4.1	2140	68	10460	11.8	22.4 E	577	7.1	1230	24.9	160	27.2	19	30	0.43
21.7	483	6.0	2050	101	9850	13.7	24.2 E	814	10.2	1220	26.5	190	29.7	22	47	0.55
22.4	560	7.0	1960	114	9660	14.3	24.9 E	916	11.5	1200	26.9	198	30.0	22	50	0.62
SITE- NB-5908 DA= 6.73 SQ MI = 4307 AC USGS QUAD- SOMERSET LATITUDE 41-46-47 LONGITUDE 71-14-23																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 1039 CFS																
35.0	100	0.3	12960	42	30680	9.1	35.0 T	154	0.4	8430	39.3	69	42.3	16	27	0.21
37.5	225	0.6	7790	58	30100	11.6	37.5 T	279	0.8	6290	41.8	88	44.8	19	37	0.43
39.5	350	1.0	6080	71	30050	13.6	39.5 T	404	1.1	5270	43.7	104	46.7	21	46	0.64
42.5	591	1.6	4160	94	26220	16.5	42.5 T	645	1.7	3820	46.5	127	49.5	24	62	0.96
SITE- NB-5909 DA= 5.77 SQ MI = 3693 AC USGS QUAD- SOMERSET LATITUDE 41-47-55 LONGITUDE 71-14-19																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.80 IN, PEAK FLOW = 1011 CFS																
48.5	0	0.0		20		4.5	64.9 E	1277	4.1	760	67.3	265	70.3	26	60	*****
52.0	100	0.3	9840	37	26890	8.1	64.6 E	1210	3.9	810	67.0	257	69.6	26	57	0.20
60.0	545	1.7	2240	76	16080	16.1	66.6 E	1643	5.3	740	69.0	308	71.6	28	68	0.87
65.9	1435	4.6	1170	228	7390	21.9	68.4 E	2138	6.8	790	70.9	419	73.4	29	79	1.80
70.4	2770	9.0	1020	377	7480	26.4	72.9 E	4084	13.2	690	75.0	832	78.5	34	122	2.82

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE NB-5910
(Perryville Pond)

Location: On Bliss Brook about 200 feet upstream from Carpenter Street in Rehoboth, Mass.

East Providence, R.I. - Mass. USGS quadrangle

Latitude: 41°51'49" Longitude: 71°15'33"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
3	13	4400	6.9

Potential for Expansion: The water level could be increased by 10 feet and a 50 acre pool created. Perryville Road and a golf course would be affected.

Remarks: The dam is an earth fill structure. The downstream slope is partially faced with stone. The principal spillway is a stone masonry drop structure with concrete cap. There is also a small drop structure and gate that control flow into an unused mill canal. There are trees growing on the dam.

Ownership and Use: The site is owned by Robert Sharples and is used for recreation.

****

EXISTING SITE NB-5911 (Warren Upper Reservoir)

Location: On Bad Luck Brook about 400 feet upstream from Kelton Street in Rehoboth, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°49'48" Longitude: 71°13'26"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
110	20	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure. The downstream slope is faced with stone; the upstream slope is riprapped. The principal spillway is a concrete drop structure. Gates can be raised to increase storage in the reservoir.

Ownership and Use: The site is owned by Montaup Electric and is used to store water for factory use.

****

EXISTING SITE NB-5912

(Shoe Factory Pond)

Location: On the Palmer River about 400 feet upstream from Reed Street in Rehoboth, Mass.

East Providence, R.I. - Mass. USGS quadrangle

Latitude: 41°48'33" Longitude: 71°16'47"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
25	13	19,700	30.8

Potential for Expansion: Significant expansion does not appear practical. A large area of shallow water would be created.

Remarks: The dam is an earth fill structure. Riprap on the upstream slope has been overgrown by grass and brush. The principal spillway is a concrete ogee weir. The dam also has a fish ladder.

Ownership and Use: The site is owned by Bristol County Water Company and is used as a water supply reservoir.

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NB-5910
Perryville Pond

NB-5911
Warren Upper Reservoir

NB-5912
Shoe Factory Pond

EXISTING RESERVOIRS
SUBWATERSHED NB-59
PALMER RIVER

USDA-SCS-HYATTSVILLE, MD. 1973

SOURCE - USGS QUAD. SHEETS
ATTLEBORO - 1964
EAST PROVIDENCE - 1949
NORTON - 1964
SOMERSET - 1967

LEGEND

- SUBWATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

5902
5903
5910
5911
5906
5912
5907
5909
5908

LOCATION MAP

PALMER RIVER (NB-59)

NARRAGANSETT BAY STUDY AREA
MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

NARRAGANSETT BAY STUDY AREA
SITE DATA FOR

Subwatershed NB-60, Ten Mile River

The Ten Mile River subwatershed covers about 36,200 acres in the municipalities of Foxborough, Plainville and Wrentham, in Norfolk County; and Attleboro, Mansfield, North Attleborough, Rehoboth, and Seekonk, in Bristol County. There is an USGS crest-stage, partial-record station on the Runnins River in Seekonk.

A preliminary investigation to determine the feasibility of a Public Law 566, Watershed Protection and Flood Prevention Act Project for the Ten Mile River Watershed has been completed by the Soil Conservation Service. A project appears to be feasible and the Sponsoring Local Organizations have requested assistance in developing a Watershed Work Plan.

Concerned groups of citizens in the Ten Mile Watershed are also participating in an inter-agency, inter-disciplinary Environmental Quality Planning Pilot Project which will assess the present level of environmental quality in the watershed and provide guidance in maintaining environmental quality in the face of increasing pressure for urbanization.

The Ten Mile River and Runnins River are the major streams in this study area. The Ten Mile River originates in Wrentham and flows southerly through Plainville, North Attleborough, Attleboro and Seekonk to the Massachusetts - Rhode Island border. Major tributaries are: the Bungay River which originates in Mansfield and flows southwesterly to the confluence with the Ten Mile River in Attleboro; and the Sevenmile River which originates in Plainville and flows southerly through North Attleborough to the confluence with the Ten Mile River in Attleboro. The Runnins River originates in Seekonk and flows southerly forming the Massachusetts - Rhode Island border in the southwestern portion of Seekonk. Elevations range from a high of about 400 feet in Plainville to a low of about ten feet in Seekonk. Geology of the subwatershed is characterized by conglomerate schist or granitic bedrock overlain by from 5 to 25 feet of outwash sand and gravel or englacial drift.

Seven potential reservoir sites and eighteen existing reservoirs were studied.

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POTENTIAL SITE NB-6001

Location: On an unnamed tributary to Speedway Brook about 2,600 feet downstream from Handy Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°55'35" Longitude: 71°16'12"

Facilities Affected:

Facility	Elevation
6 houses	135
4 houses	130
Garage	130

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to conglomerate bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor; leakage is expected through both abutments and possibly through the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE NB-6003

Location: On an unnamed tributary to the Ten Mile River about 2,000 feet downstream from Oak Hill Avenue in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°54'23" Longitude: 71°17'49"

Facilities Affected:

Facility	Elevation
Gas pipeline	160
5 houses	155
3 garages	155
Thurber Avenue	155
6 houses	150
3 garages	150

Geologic Conditions: Both abutments are outwash sand and gravel. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be fair to poor depending on the amount of fine grained material in the abutments. Leakage is expected through both abutments. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. Three auxiliary dikes will be needed above elevation 155.

****

POTENTIAL SITE NB-6004

Location: On the Sevenmile River about 2,500 feet upstream from Hoppin Hill Avenue in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'36" Longitude: 71°20'52"

Facilities Affected:

Facility	Elevation
3 houses	215
Route 120	215
2 houses	205
4 houses	200
Hoppin Hill Avenue	200
House	195
House	190

Geologic Conditions: The right abutment is poorly graded coarse sand and gravel outwash. The left abutment is granitic bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 15 feet. Waterholding capabilities appear to be fair; leakage is expected through the right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock. An auxiliary dike will be needed above elevation 205.

****

POTENTIAL SITE NB-6008

Location: On an unnamed tributary to Coles Brook about 500 feet upstream from Taunton Avenue in Seekonk, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°52'55" Longitude: 71°18'17"

Facilities Affected:

Facility	Elevation
Sweeney Road	160

Geologic Conditions: Both abutments are outwash sand and gravel underlain by schist or conglomerate bedrock. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

POTENTIAL SITE NB-6008 (continued)

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location. An auxiliary dike will be needed above elevation 155.

****

POTENTIAL SITE NB-6009

Location: On the Sevenmile River about 750 feet upstream from Hoppin Hill Avenue in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'47" Longitude: 71°21'22"

Facilities Affected:

Facility	Elevation
House	220
Route 120	215

Geologic Conditions: The left abutment is poorly graded sand and gravel outwash with granitic bedrock outcrops high on the slope. The right abutment is poorly graded sand and gravel. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be fair to poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE NB-6010

Location: On the Sevenmile River about 4,300 feet downstream from Read Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°55'02" Longitude: 71°21'10"

Facilities Affected:

Facility	Elevation
9 houses	90
Garage	90
Road	90
11 houses	85

Geologic Conditions: Both abutments are poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 50 to 60 feet. Waterholding capabilities appear to be poor. Leakage is expected through both abutments and the foundation. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: Preliminary design information indicates that a concrete drop structure emergency spillway may be required at this site.

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POTENTIAL SITE NB-6011

Location: On an unnamed tributary to the Ten Mile River about 1,600 feet upstream from Towne Street in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°58'47" Longitude: 71°18'19"

Facilities Affected:

Facility	Elevation
Power line poles	215

Geologic Conditions: The left abutment is thin discontinuous englacial drift underlain by pink conglomerate bedrock. There are bedrock outcrops high on the left abutment. The right abutment is poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be fair; leakage is expected through the right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE NB-6012

Location: On the Bungay River about 1,000 feet upstream from Holden Street in Attleboro, Massachusetts.

Attleboro, Massachusetts USGS quadrangle

Latitude: 41°57'20" Longitude: 71°16'42"

Remarks: This site was considered as a floodwater retarding structure location in the preliminary investigation report for the Ten Mile River Watershed.

Detailed planning investigations will determine geologic conditions, affected facilities, and the feasibility of multi-purpose use of the site.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY — SUBWATERSHED-TEN MILE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	STORAGE IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV + TYPE (MSL)	STORAGE AT CREST AC FT	STORAGE AT CREST IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-NB-6001 DA= 1.09 SQ MI = 698 AC — USGS QUAD-ATTLEBORO — LATITUDE 41-55-35 LONGITUDE 71-16-12																
SITE RATING (3) — STREAM WATER QUALITY (B) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.10 IN, PEAK FLOW = 240 CFS																
117.1	0	0.0		9		1.2	124.1 E	241	4.1	2130	126.3	78	129.0	13	43	*****
121.3	100	1.7	5690	39	14460	5.4	123.8 E	231	4.0	2460	126.3	77	128.5	13	39	0.16
123.6	202	3.5	3380	56	12220	7.6	126.1 E	375	6.4	1820	128.3	94	130.8	15	54	0.28
125.1	305	5.1	2540	69	11270	9.2	127.6 E	509	8.8	1520	130.1	107	132.6	17	66	0.37
126.6	407	7.0	2090	79	10700	10.6	129.1 E	639	11.0	1330	131.3	140	134.1	18	77	0.45
SITE-NB-6003 DA= 0.54 SQ MI = 346 AC — USGS QUAD-ATTLEBORO — LATITUDE 41-54-23 LONGITUDE 71-17-49																
SITE RATING (3) — STREAM WATER QUALITY (B) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.00 IN, PEAK FLOW = 178 CFS																
135.3	0	0.0		2		3.4	148.3 E	120	4.1	4010	150.8	32	152.8	21	26	*****
147.3	100	3.5	5950	16	36180	15.3	149.8 E	150	5.1	3980	152.2	52	153.8	22	29	0.14
148.7	122	4.1	5660	18	37740	16.7	151.2 E	192	6.6	3600	153.6	72	155.5	24	38	0.16
150.5	165	5.6	5010	28	29460	18.5	153.0 E	286	9.8	2890	154.8	90	157.1	25	49	0.18
152.1	230	8.0	4450	51	20160	20.1	154.6 E	405	14.1	2530	155.7	102	157.8	26	57	0.24
SITE-NB-6004 DA= 2.39 SQ MI = 1530 AC — USGS QUAD-ATTLEBORO — LATITUDE 41-57-36 LONGITUDE 71-20-52																
SITE RATING (2) — STREAM WATER QUALITY (A) — 100-YR PRIN SPWY DESIGN STORM — RUNOFF = 6.20 IN, PEAK FLOW = 749 CFS																
180.0	0	0.0		9		4.0	193.1 E	529	4.1	2390	198.8	113	205.3	29	106	*****
184.8	100	0.8	10640	30	35080	8.8	187.3 E	207	1.6	5140	196.5	97	202.7	27	83	0.18
191.5	402	3.2	4320	63	27610	15.5	191.5 N	421	3.3	4130	202.8	141	218.6	43	290	0.56
198.5	1006	7.8	1730	111	15720	22.5	201.0 E	1328	10.3	1310	206.1	165	211.5	36	177	1.07
205.2	1912	15.0	1140	159	13690	29.2	207.7 E	2351	18.4	920	211.3	208	216.2	40	246	1.57

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED-TEN MILE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-NB-6008 DA= 0.96 SQ MI = 614 AC USGS QUAD-ATTLEBORO LATITUDE 41-52-55 LONGITUDE 71-18-17																
SITE RATING (3) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.00 IN, PEAK FLOW = 227 CFS																
143.5	0	0.0		8		1.5	150.8 E	212	4.1	1510	153.3	72	155.6	14	12	*****
148.3	100	2.0	3590	33	10860	6.4	150.8 E	211	4.1	1700	153.2	70	154.8	13	10	0.16
150.1	164	3.2	2540	42	9790	8.1	152.6 E	309	6.0	1350	155.1	87	157.2	15	16	0.23
151.3	227	4.4	2130	54	9000	9.3	153.8 E	397	7.8	1220	156.3	99	158.8	17	24	0.29
152.5	291	5.6	1860	64	8480	10.5	155.0 E	488	9.5	1110	157.2	106	159.6	18	30	0.34
152.5	293	5.6	1850	64	8470	10.5	155.0 E	490	9.6	1110	157.2	107	159.6	18	30	0.34
SITE-NB-6009 DA= 1.96 SQ MI = 1254 AC USGS QUAD-ATTLEBORO LATITUDE 41-57-47 LONGITUDE 71-21-22																
SITE RATING (2) STREAM WATER QUALITY (A) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.20 IN, PEAK FLOW = 614 CFS																
197.2	0	0.0		9		3.2	210.3 E	434	4.1	1470	212.7	76	214.8	21	41	*****
202.8	100	1.0	7000	28	25290	8.8	211.3 E	500	4.8	1400	213.8	83	215.8	22	46	0.18
207.7	275	2.5	2900	46	17320	13.7	212.2 E	551	5.3	1450	214.6	89	216.3	22	49	0.40
213.3	625	6.0	1740	80	13620	19.4	215.8 E	859	8.2	1270	218.2	116	220.2	26	76	0.72
218.7	1150	11.0	1280	119	12360	24.7	221.2 E	1484	14.2	990	223.6	153	225.7	32	129	1.08
SITE-NB-6010 DA= 9.50 SQ MI = 6080 AC USGS QUAD-ATTLEBORO LATITUDE 41-55-02 LONGITUDE 71-21-10																
SITE RATING (3) STREAM WATER QUALITY (C) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 6.10 IN, PEAK FLOW = 1875 CFS																
79.4	100	0.2	15010	63	23650	5.4	79.4 T	176	0.3	8530	88.4	161	91.4	17	30	0.21
82.1	313	0.6	5150	94	17250	8.1	82.1 T	389	0.8	4140	89.1	168	92.1	18	33	0.59
84.1	527	1.0	3210	116	14640	10.2	84.1 T	603	1.2	2810	89.1	169	92.1	18	33	0.95
85.9	740	1.5	2560	134	14160	11.8	85.9 T	816	1.6	2320	90.0	178	93.0	19	38	1.24

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
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(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED-TEN MILE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95
ELEV	STORAGE		COST PER AC FT	AREA	COST/ SURF AC	DEPTH AT DAM	CREST ELEV ++ TYPE	STORAGE AT CREST		COST PER AC FT	ELEV	AREA	TOP ELEV	HGT	FILL VOL (1000	PERCENT CHANCE
(MSL)	AC FT	IN	($)	(AC)	($)	(FT)	(MSL)	AC FT	IN	($)	(MSL)	(AC)	(MSL)	FT	CY)	(MGD)
SITE-NB-6011			DA= 0.75 SQ MI = 480 AC				USGS QUAD-ATTLEBORO								LATITUDE 41-58-47	LONGITUDE 71-18-19
SITE RATING (2)			STREAM WATER QUALITY (B)				100-YR PRIN SPWY DESIGN STORM				RUNOFF = 6.20 IN, PEAK FLOW = 266 CFS					
194.0	0	0.0		3		4.0	206.5 E	166	4.1	2350	209.0	41	211.6	22	37	*****
204.3	100	2.5	4550	24	19100	14.3	206.8 E	178	4.5	2550	209.2	42	211.0	21	35	0.15
207.0	178	4.4	3160	34	16560	17.0	209.5 E	279	7.0	2010	211.8	52	214.1	24	49	0.23
209.1	255	6.4	2580	42	15820	19.1	211.6 E	377	9.3	1750	214.0	60	216.2	26	62	0.29
212.3	410	10.3	2040	54	15600	22.4	214.8 E	563	14.1	1490	217.1	71	219.6	30	85	0.40
212.5	418	10.3	2020	54	15600	22.5	215.0 E	571	14.2	1480	217.2	71	219.7	30	86	0.40

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
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(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
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** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE NB-6013 (Fuller Pond)

Location: On the Ten Mile River at Fuller Street in Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°00'45" Longitude: 71°20'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	7	1200	1.9

Potential for Expansion: The pool area could be tripled. Fuller Street and a house would be affected.

Remarks: The dam is an earth fill structure with Fuller Street across the top. The upstream slope is faced with stone. The spillway is a concrete drop inlet with flashboards and a stone, box culvert, conduit. There are trees and brush growing on both slopes of the dam.

Ownership and Use: The site is owned by the Town of North Attleboro and is used to store water.

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EXISTING SITE NB-6014
(Plainville Pond)

Location: On the Ten Mile River about 800 feet upstream of West Bacon Street in Plainville, Mass.

Wrentham, Mass. USGS quadrangle

Latitude: 42°00'17" Longitude: 71°20'20"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	5	1950	3.0

Potential for Expansion: Significant expansion does not appear practical. Topography limits a higher dam due to the lack of high abutments. Expansion would affect buildings in the center of Plainville.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop structure with flashboards.

Ownership and Use: The site is owned by the Town of Plainville and is used for recreation.

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EXISTING SITE NB-6015
(Wetherells Pond)

Location: On the Ten Mile River about 1,300 feet downstream from West Bacon Street in Plainville, Mass.

Attleboro, Mass. and Wrentham, Mass. USGS quadrangles

Latitude: 41°59'58" Longitude: 71°20'05"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
12	8	2100	3.3

Potential for Expansion: Significant expansion does not appear practical. Any expansion would affect the center of the Town of Plainville.

Remarks: The dam is an earth fill structure. The spillway is a concrete drop structure with flashboards. Trees are growing on the dam. The spillway masonry sidewalls are deteriorating and falling into the channel.

Ownership and Use: The site is owned by Joe Micani and is used for recreation.

****

EXISTING SITE NB-6016 (Whiting Pond)

Location: On the Ten Mile River about 400 feet upstream from Broad Street in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°59'37" Longitude: 71°20'01"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
18	8	2450	3.8

Potential for Expansion: Significant expansion does not appear practical. Topography limits a higher dam due to the lack of high abutments. The pond is surrounded by streets and houses which would be affected.

Remarks: The dam is an earth fill structure. The spillway is a concrete and stone masonry drop structure with flashboards. Trees are growing on the dam.

Ownership and Use: The site is owned by the Town of Attleboro and is used for recreation.

****

EXISTING SITE NB-6017

Location: On an unnamed tributary to the Ten Mile River about 1,000 feet upstream from Broad Street in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°59'29" Longitude: 71°20'08"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
3	3	100	0.2

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. The pond is surrounded by Whiting Pond, two streets and about twenty houses.

Remarks: The dam is a low earth fill structure. A concrete headwall extends along the pool area. The principal spillway is a six-inch circular opening in the headwall. The entire headwall acts as an emergency spillway.

Ownership and Use: The site is owned by Edwin N. Cook Company. Use of the site is not known.

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EXISTING SITE NB-6018

(Falls Pond-South)

Location: On an unnamed tributary to the Ten Mile River at Reservoir Street in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'58" Longitude: 71°19'27"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
45	20	400	0.6

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. There are many houses and cottages which would be affected by expansion of the pond.

Remarks: The dam is an earth fill structure with Reservoir Street across the top. The spillway is a concrete drop inlet, with two sets of flashboards, which is connected to a 42-inch concrete pipe culvert and masonry box culvert.

Ownership and Use: The site is owned by the Town of North Attleborough and is used for recreation.

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EXISTING SITE NB-6019

(Falls Pond-North)

Location: On the Ten Mile River about 300 feet upstream from Mount Hope Street in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'59" Longitude: 71°19'28"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
60	17	5450	8.5

Potential for Expansion: Significant expansion does not appear practical. The pond is surrounded by houses and cottages that would be affected by expansion.

Remarks: The dam is a concrete broad-crested weir. Normal pond level is maintained by a weir and three bascule gates are used to control high flows.

Ownership and Use: The site is owned by the Town of North Attleborough and is used for recreation.

****

EXISTING SITE NB-6020 (Farmers Pond)

Location: On the Ten Mile River about 1,000 feet upstream from West Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'08" Longitude: 71°18'02"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	11	7150	11.2

Potential for Expansion: Significant expansion does not appear practical. Interstate Route 95 and many houses would be affected by expansion.

Remarks: The dam is an earth fill structure. The downstream slope is faced with stone. The principal spillway is a concrete flume with flashboards. The other spillway is an old drop structure held in position by wood piles and dumped rocks. Trees are growing on the dam. Concrete in the principal spillway is cracked and spalled. The old spillway structure is rotting and leakage occurs under and around the spillway.

EXISTING SITE NB-6020 (continued)

Ownership and Use: The site is owned by Massachusetts Electric Company and is used for recreation.

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EXISTING SITE NB-6021

(Greenwood Lake)

Location: On Bungay Brook immediately upstream of the North Attleborough National Fish Hatchery in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°59'31" Longitude: 71°16'58"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
110	12	900	1.4

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. Many houses and cottages which line the shore would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is riprapped. The principal spillway is a concrete drop structure. There is also a drop inlet with a gate which provides water to the National Fish Hatchery.

Ownership and Use: The site is owned by the U.S. Department of the Interior and is used in the operation of the National Fish Hatchery and for recreation.

****

EXISTING SITE NB-6022

(Mechanics Pond)

Location: On the Ten Mile River about 1,100 feet upstream from Mechanic Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°56'45" Longitude: 71°17'38"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
19	10	12,000	18.8

Potential for Expansion: Significant expansion does not appear practical. The pond is located near the center of Attleboro and many streets and houses would be affected.

Remarks: The dam is a timber drop structure with slanting flashboards and timber bracing. Spillway sidewalls are constructed of concrete blocks. There is some erosion behind the right wingwall. Some of the concrete sidewall blocks are broken.

Ownership and Use: The site is owned by Grover Richards and is used to store water for factory use.

****

EXISTING SITE NB-6023

(Dodgeville Pond)

Location: On the Ten Mile River about 3,000 feet upstream from Tiffany Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°55'19" Longitude: 71°17'48"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
45	23	14,850	23.2

Potential for Expansion: Significant expansion does not appear practical. The pond is located near the center of Attleboro. Many streets and houses would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is riprapped. The spillway is a stone masonry drop structure with boards on the downstream end. A multi-bay timber structure is built on the masonry drop structure to provide about four feet of additional depth. Two bays of stop logs are mechnically operated.

EXISTING SITE NB-6023 (continued)

Ownership and Use: The site is owned by Dodgeville Finishing Company and is used to store water for factory use.

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EXISTING SITE NB-6024

Location: On the Ten Mile River about 100 feet downstream from Bridge Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°54'18" Longitude: 71°19'13"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
20	15	16,750	26.2

Potential for Expansion: It appears possible to triple the surface area. Two streets and several houses would be affected.

Remarks: The dam is a stone masonry drop structure. Several side outlets which were used for mill operations are no longer used. Bridge Street crosses the pond about 100 feet upstream from the dam.

Ownership and Use: The site is owned by Hebren Warehouse and Finishing Company and is used to store water for factory use.

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EXISTING SITE NB-6025

Location: On the Tenmile River about 500 feet downstream from Pond Street in Seekonk, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°53'44" Longitude: 71°19'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
10	9	17,750	27.7

Potential for Expansion: Significant expansion does not appear practical. Any expansion would affect the Penn-Central Railroad, several streets, and many houses.

Remarks: The dam is a series of three concrete drop structures; one with flashboards to control flow to the factory located on the left abutment.

Ownership and Use: The site is owned by Attleboro Dyeing and Finishing Company and is used to store water for factory use.

****

EXISTING SITE NB-6026

(Hoppin Hill Reservoir)

Location: On an unnamed tributary to the Sevenmile River about 1,200 feet downstream of Route 120 in North Attleborough, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°57'43" Longitude: 71°20'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
35	23	350	0.5

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. The reservoir is probably used as a pumped storage site and expansion would depend on the ability to pump additional water to the site.

Remarks: The dam is an earth fill structure. The upstream slope is riprapped with concrete slabs. The spillway is a concrete drop structure with flashboards.

Ownership and Use: The site is owned by the Town of Attleboro and is used as a water supply reservoir.

****

EXISTING SITE NB-6027

(Luther Reservoir)

Location: On the Sevenmile River about 3,000 feet upstream from West Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°56'08" Longitude: 71°20'13"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
25	14	1350	2.1

Potential for Expansion: It appears that depth could be increased about five feet without affecting facilities. Gravel pits located on the left abutment indicate that seepage through the foundation may be a problem.

Remarks: The dam is an earth fill structure with downstream concrete face. The upstream slope is riprapped. The spillway is a concrete drop structure.

Ownership and Use: The site is owned by the Town of Attleboro and is used as a water supply reservoir.

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EXISTING SITE NB-6028

(Manchester Pond Reservoir)

Location: On Fourmile Brook about 2,000 feet upstream from West Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°56'28" Longitude: 71°19'28"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
225	33	500	0.8

Potential for Expansion: Manchester Pond is a pumped storage reservoir. Any expansion would be based on the ability to pump additional water to the reservoir. A long dam would be required for expansion.

EXISTING SITE NB-6028 (continued)

Remarks: The dam is an earth fill structure. The upstream slope is riprapped. The outlet is a gate-controlled spillway which provides flow to the Attleboro Water Department. The emergency spillway is a concrete drop structure which is not functional. A road has been built across the emergency spillway inlet channel preventing flow from reaching the drop structure.

Ownership and Use: The site is owned by the Town of Attleboro and is used as a water supply reservoir.

****

EXISTING SITE NB-6029 (Orr Pond)

Location: On the Sevenmile River about 700 feet upstream from Read Street in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°55'38" Longitude: 71°20'27"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
50	15	3450	5.4

Potential for Expansion: Significant expansion does not appear practical. Route 123, Interstate 95, the Attleboro Water Works and several local streets would be affected.

Remarks: The dam is an earth fill structure. The upstream slope is partially faced with stone masonry. The spillway is a stone masonry ogee spillway with provision for flashboards.

Ownership and Use: The site is owned by the Town of Attleboro and is used as a water supply reservoir.

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EXISTING SITE NB-6030 (Lake Como)

Location: On an unnamed tributary to the Sevenmile River about 100 feet upstream of Route 1, Washington Street, in Attleboro, Mass.

Attleboro, Mass. USGS quadrangle

Latitude: 41°55'34" Longitude: 71°21'23"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
9	12	200	0.3

Potential for Expansion: Significant expansion does not appear practical. The small drainage area limits expansion potential. Several streets and houses would be affected.

Remarks: The dam is an earth fill structure with four-lane Route 1 across the top. The upstream slope is faced with a concrete headwall. The spillway is a concrete drop inlet structure and a concrete pipe conduit. The headwall is badly spalled.

Ownership and Use: The site is owned by the Seventh Day Adventist Church and is used for recreation.

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NB-6014
Plainville Pond

NB-6015
Wetherells Pond

NB-6016
Whiting Pond

EXISTING RESERVOIRS
SUBWATERSHED NB-60
TEN MILE RIVER

USDA-SCS-HYATTSVILLE, MD 1973

NB-6018
Falls Pond South

NB-6023
Dodgeville Pond

NB-6019
Falls Pond North

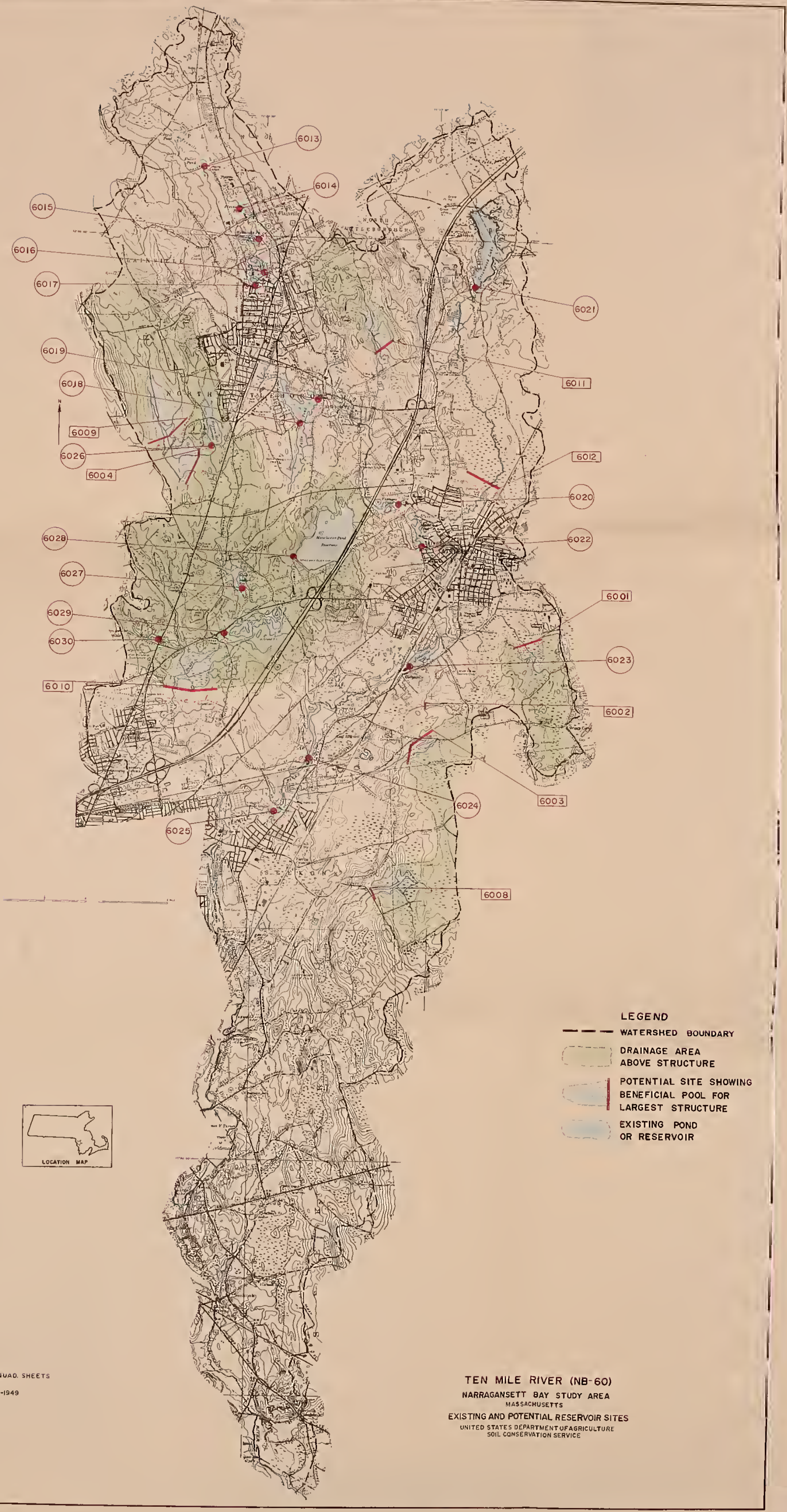
NB-6024

NB-6022
Mechanics Pond

NB-6028
Manchester Pond

EXISTING RESERVOIRS
SUBWATERSHED NB-60
TEN MILE RIVER

USDA SCS-HYATTSVILLE, MD 1973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LEGEND
WATERSHED BOUNDARY
DRAINAGE AREA ABOVE STRUCTURE
POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
EXISTING POND OR RESERVOIR
LOCATION MAP
SOURCE - USGS QUAD. SHEETS
ATTLEBORO - 1964
EAST PROVIDENCE - 1949
WRENTHAM - 1964
TEN MILE RIVER (NB-60)
NARRAGANSETT BAY STUDY AREA
MASSACHUSETTS
EXISTING AND POTENTIAL RESERVOIR SITES
UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

NARRAGANSETT BAY STUDY AREA
SITE DATA FOR

Subwatershed NB-71, Quequechan River

The Quequechan River subwatershed covers about 22,200 acres in Fall River, Freetown and Westport, all in Bristol County.

The Quequechan River originates in the northern portion of Fall River and flows southerly into North Watuppa Pond and South Watuppa Pond, and then northeasterly to the confluence with the Taunton River. Elevations range from a high of about 320 feet in Fall River to sea level, also in Fall River. Geology of the subwatershed is characterized by conglomerate bedrock overlain by from 10 to 25 feet of outwash sand and gravel or englacial drift.

Five existing reservoirs were studied. There were no potential reservoir sites that met study criteria.

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EXISTING SITE NB-7101 (Bleachery Pond)

Location: On Sucker Brook about 3,700 feet downstream from Route 81 in Fall River, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°40'19" Longitude: 71°08'51"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	10	3000	4.7

Potential for Expansion: Significant expansion does not appear practical. Topography limits a higher dam due to the lack of high abutments.

Remarks: The dam is an earth fill structure. The upstream slope is faced with stone. On the downstream side is a partially demolished factory building. The spillway is a concrete flume with mechanically operated stop logs. Concrete in the flume is spalled and the stop logs appear inoperable. Original surface area of the pond was about 20 acres.

Ownership and Use: The site is owned by the Estes Estate and is used by Anodizing Company for factory use.

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EXISTING SITE NB-7102 (Sawdy Pond)

Location: On Stony Brook at Route 177 in Westport, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°37'41" Longitude: 71°08'04"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
370	11	2300	3.6

Potential for Expansion: Significant expansion does not appear practical. Many houses and cottages line the shore. The small drainage area limits expansion potential.

Remarks: The dam is an earth fill structure with Route 177 across the top. The spillway is a concrete and stone masonry flume with flashboards. The spillway headwall is cracked and spalled.

Ownership and Use: The site is owned by Watuppa Reservoir Company and is a water supply reservoir for Fall River.

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EXISTING SITE NB-7103
(North Watuppa Pond)

Location: On a tributary to the Quequechan River at Routes 195, 24, and 6 in Fall River, Mass.

Fall River East, Mass. USGS quadrangle

Latitude: 41°42'11" Longitude: 71°05'51"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
1750	Not Known	5900	9.2

Potential for Expansion: Significant expansion does not appear practical. Several new highways would be affected. Inflow into the pond is supplemented by pumping from locations in Westport. Any expansion of the pond would depend on the addition of pumping capacity.

Remarks: The dam is an earth fill structure with Interstate 195, Route 6 and the Penn-Central Railroad across the top. The downstream slope is riprapped and the upstream slope is faced with stone. A control building contained the original mechanically operated gates. Gates do not appear to be used and flow passes into South Watuppa Pond.

EXISTING SITE NB-7103 (continued)

Ownership and Use: The site is owned by the City of Fall River and is used as a water supply reservoir.

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EXISTING SITE NB-7104
(South Watuppa Pond)

Location: On the Quequechan River at Plymouth Avenue in Fall River, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°41'47" Longitude: 71°09'01"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
1660	10	19,050	29.8

Potential for Expansion: Significant expansion does not appear practical. Hundreds of houses and several factories line the shore.

Remarks: The northwest section of the pond has been crossed by Route 24, Interstate 195, and the Penn-Central Railroad creating a series of small ponds, in addition to the large main pond. The pond outlet is over riprapped channel and through a concrete conduit to Mount Hope Bay.

Ownership and Use: Ownership of the pond is not known. The pond is used by many factories and for recreation.

****

EXISTING SITE NB-7105 (Firestone Pond)

Location: On a tributary to Mount Hope Bay between Routes 138, Interstate 95, and Mount Hope Bay in Fall River, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°42'11" Longitude: 71°09'57"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
5	About 10	25	0.1

Potential for Expansion: Significant expansion does not appear practical. The pond is located in an urban area and many factory buildings would be affected.

EXISTING SITE NB-7105 (continued)

Remarks: The dam is an earth fill structure with a paved roadway running around the pond. The upstream slope is faced with stone. A large factory complex is located downstream from the dam. There are several outlet structures. The principal spillways are two concrete flumes with flashboards. Storm sewer outlets could greatly increase the drainage area of the pond.

Ownership and Use: The site is owned by Firestone Division of Watuppa Reservoir Company and is used to store water for factory use.

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NB-7101
Bleachery Pond

NB-7104
South Watuppa Pond

NB-7105
Firestone Pond

EXISTING RESERVOIRS
SUBWATERSHED NB-71
QUEQUECHAN RIVER

USDA-SCS-HYATTSVILLE, MD. 1973

SOURCE: USGS QUAD SHEETS
FALL RIVER-1967
SOMERSET-1967
ASSONET-1963
FALL RIVER EAST-1969
TIVERTON-1949
WEST PORT-1963

QUEQUECHAN RIVER (NB-71)

NARRAGANSETT BAY STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

NARRAGANSETT BAY STUDY AREA
SITE DATA FOR

Subwatershed NB-72, Cole River

The Cole River subwatershed covers about 23,500 acres in the municipalities of Dighton, Rehoboth, Somerset and Swansea, all in Bristol County.

The Cole River originates in Dighton and flows southerly through Swansea into Mount Hope Bay. The Lee River originates in Swansea and also flows southerly into Mount Hope Bay. The Taunton River forms the southeastern study area boundary. Elevations range from a high of 204 feet on Lookout Hill in Rehoboth to sea level in Mount Hope Bay. Geology of the subwatershed is characterized by conglomerate bedrock overlain by from 10 to 25 feet of outwash sand and gravel or englacial drift.

Seven potential reservoir sites and seven existing reservoirs were studied.

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POTENTIAL SITE NB-7201

Location: On an unnamed tributary to the Taunton River about 1,600 feet upstream from Prospect Street in Somerset, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°44'37" Longitude: 71°09'20"

Facilities Affected:

Facility	Elevation
House	100
11 houses	95
2 garages	95
2 houses	90
Swimming pool	90
Unnamed road	90

Geologic Conditions: Both abutments are englacial drift underlain by bedrock. Depth to bedrock in the foundation is estimated to be from 20 to 25 feet. Waterholding capabilities appear to be fair to good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE NB-7202

Location: On an unnamed tributary to the Cole River about 800 feet upstream from Barton Avenue at an old trolley roadbed in Swansea, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°43'41" Longitude: 71°13'51"

Facilities Affected:

Facility	Elevation
House	40
Warren Road	40
3 houses	35
Wilbur Avenue	30
Cemetery	20

Geologic Conditions: The right abutment is thin discontinuous poorly graded sand and gravel outwash over conglomerate bedrock outcrops. The left abutment is outwash sand and gravel underlain by bedrock. Depth to bedrock in the foundation is estimated to be from 5 to 10 feet. Waterholding capabilities appear to be poor; leakage is expected through the left abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in bedrock.

****

POTENTIAL SITE NB-7204

Location: On Lewin Brook about 150 feet upstream from Sharps Lot Road in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°45'44" Longitude: 71°10'29"

Facilities Affected:

Facility	Elevation
2 houses	135
Garage	135
Garage	130
Buffington Street	130
Power line poles	125

Geologic Conditions: Both abutments are conglomerate bedrock overlain by thin discontinuous deposits of englacial drift. Bedrock outcrops in the foundation. Waterholding capabilities appear to be good. Pervious borrow material for dam construction was located near the site; impervious material was not located.

POTENTIAL SITE NB-7204 (continued)

Engineering Notes: Preliminary design information indicates that a concrete monolithic conduit emergency spillway may be needed at this site.

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POTENTIAL SITE NB-7205

Location: On Lewin Brook about 9,100 feet upstream from Stevens Road in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°46'11" Longitude: 71°10'57"

Facilities Affected:

Facility	Elevation
2 houses	95
Marvel Street	90
House	85
Hailes Hill Road	80

Geologic Conditions: The left abutment is thin discontinuous englacial drift with conglomerate bedrock outcrops high on the abutment. The right abutment is conglomerate bedrock high on the abutment with poorly graded sand and gravel outwash at the lower slope. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be good, providing a cut-off is made to bedrock in the foundation and right abutment. Pervious borrow material for dam construction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the excavated emergency spillway location.

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POTENTIAL SITE NB-7206

Location: On Lewin Brook about 6,400 feet upstream from Stevens Road in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°45'48" Longitude: 71°11'20"

Facilities Affected:

Facility	Elevation
2 houses	95
Marvel Street	90
2 houses	85
8 houses	65
Shed	65
Hailes Hill Road	65

Geologic Conditions: Both abutments are conglomerate bedrock overlain by thin discontinuous poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 10 to 15 feet. Waterholding capabilities appear to be good, providing a cut-off is made to bedrock in the foundation. Pervious borrow material for dam contruction was located near the site; impervious material was not located.

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in rock. Auxiliary dikes will be needed at elevations 72, 82, and 85.

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POTENTIAL SITE NB-7207

Location: On the Cole River about 1,500 feet upstream from Hortonville Road in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°46'36" Longitude: 71°11'41"

Facilities Affected:

Facility	Elevation
Cedar Street	90
Lewis Street	90
Baker Road	85

Geologic Conditions: The left abutment is conglomerate bedrock overlain by thin discontinuous englacial drift. The right abutment is conglomerate bedrock overlain by thin poorly graded sand and gravel outwash. Depth to bedrock in the foundation is estimated to be from 5 to 15 feet. Waterholding capabilities appear to be good, providing a cut-off is made to bedrock on the right abutment and in the foundation. Borrow material for dam construction was not located near the site.

POTENTIAL SITE NB-7207 (continued)

Engineering Notes: The left abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in rock.

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POTENTIAL SITE NB-7208

Location: On Labor in Vain Brook about 800 feet upstream from the Dighton - Somerset town line in Dighton, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°47'28" Longitude: 71°09'02"

Facilities Affected:

Facility	Elevation
Power line poles	115
Power line towers	115

Geologic Conditions: Both abutments are conglomerate bedrock. The right abutment is overlain by silty sand and gravel, englacial drift. Depth to bedrock in the foundation is estimated to be from 10 to 20 feet. Waterholding capabilities appear to be good. Borrow material for dam construction was located near the site.

Engineering Notes: The right abutment is recommended for the emergency spillway location. The emergency spillway would probably be excavated in rock.

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SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED-COLE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	PERCENT CHANCE (MGD)
SITE-NB-7201 DA= 0.63 SQ MI = 403 AC USGS QUAD-FALL RIVER LATITUDE 41-44-37 LONGITUDE 71-09-20																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 186 CFS																
74.1	0	0.0		2		4.1	89.6 E	139	4.1	4410	91.9	23	93.9	24	56	*****
87.5	100	3.0	6820	15	45190	17.5	90.0 E	146	4.3	4670	92.3	24	93.9	24	56	0.14
89.1	127	3.8	6390	17	47100	19.1	91.6 E	182	5.4	4480	94.0	27	95.6	26	67	0.17
90.6	155	4.6	5960	20	46660	20.6	93.1 E	216	6.4	4260	95.6	31	97.3	27	80	0.18
91.9	182	5.4	5380	23	43040	21.9	94.4 E	251	7.5	3890	96.8	34	98.6	29	92	0.21
92.5	196	5.8	5130	24	41710	22.5	95.0 E	269	8.0	3740	97.4	35	99.1	29	97	0.23
SITE-NB-7202 DA= 1.80 SQ MI = 1152 AC USGS QUAD-FALL RIVER LATITUDE 41-43-41 LONGITUDE 71-13-51																
SITE RATING (2) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 416 CFS																
12.6	0	0.0		9		2.5	24.2 E	398	4.1	1880	28.5	96	34.4	24	58	*****
17.9	100	1.0	7290	28	25810	7.8	17.9 N	114	1.2	6370	30.0	106	38.0	28	83	0.18
22.4	275	2.9	3230	53	16820	12.3	24.9 E	445	4.6	2000	30.2	108	35.5	26	65	0.39
27.4	626	6.5	1910	88	13620	17.4	29.9 E	879	9.2	1360	33.9	146	38.5	29	87	0.70
32.3	1152	12.0	1240	130	11030	22.2	34.8 E	1522	15.8	940	37.5	184	41.4	31	113	1.04
SITE-NB-7204 DA= 0.77 SQ MI = 493 AC USGS QUAD-SOMERSET LATITUDE 41-45-44 LONGITUDE 71-10-29																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 247 CFS																
114.0	0	0.0		5		2.0	123.1 E	170	4.1	3090	126.3	57	132.2	20	59	*****
121.1	100	2.4	5810	26	22280	9.2	121.1 E	106	2.5	5470	126.5	57	132.1	20	58	0.15
123.5	176	4.3	3760	40	16730	11.5	123.5 E	182	4.4	3640	128.1	67	133.2	21	66	0.23
125.1	252	6.1	2890	50	14680	13.2	125.1 E	259	6.3	2820	129.5	75	134.0	22	74	0.29
126.6	329	8.0	2450	58	13850	14.6	126.6 E	335	8.2	2400	130.6	85	134.7	23	80	0.35

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- NARRAGANSETT BAY SUBWATERSHED-COLE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95 PERCENT CHANCE
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	(MGD)
SITE-NB-7205 DA= 1.48 SQ MI = 947 AC USGS QUAD-SOMERSET LATITUDE 41-46-11 LONGITUDE 71-10-57																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 436 CFS																
67.9	0	0.0		6		3.9	86.6 E	328	4.1	2760	92.9	48	99.4	35	100	*****
76.8	100	1.2	8060	15	52200	12.8	79.3 E	153	1.9	5260.	88.3	34	94.6	31	73	0.17
82.0	194	2.5	4890	22	42970	18.0	84.5 E	267	3.4	3540	92.8	47	98.6	35	96	0.29
88.6	381	4.8	3120	34	34750	24.6	91.1 E	486	6.1	2440	95.9	59	99.4	35	100	0.47
92.5	534	6.8	2700	46	31280	28.5	95.0 E	673	8.5	2140	97.8	66	99.8	36	103	0.59
SITE-NB-7206 DA= 2.11 SQ MI = 1350 AC USGS QUAD-SOMERSET LATITUDE 41-45-48 LONGITUDE 71-11-20																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 621 CFS																
52.5	0	0.0		9		4.5	66.9 E	467	4.1	2360	72.9	84	80.0	32	79	*****
58.1	100	0.8	10800	25	42700	10.2	60.6 E	191	1.7	5660	70.0	70	76.6	29	59	0.18
66.1	402	3.5	3060	54	22700	18.1	68.6 E	568	5.0	2170	75.8	98	82.1	34	95	0.55
74.4	1007	8.8	1510	91	16700	26.4	76.9 E	1266	11.2	1200	82.1	137	87.6	40	150	1.03
82.4	1913	17.0	1050	139	14470	34.4	84.9 E	2292	20.4	880	88.3	190	93.0	45	230	1.47
SITE-NB-7207 DA= 7.62 SQ MI = 4877 AC USGS QUAD-SOMERSET LATITUDE 41-46-36 LONGITUDE 71-11-41																
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.70 IN, PEAK FLOW = 873 CFS																
71.1	0	0.0		49		5.1	79.1 E	1687	4.1	690	84.1	755	88.6	23	74	*****
72.5	100	0.2	11990	101	11860	6.5	72.5 N	161	0.4	7450	84.1	761	90.1	24	91	0.21
75.0	490	1.2	2620	200	6420	9.0	77.5 E	1163	2.9	1100	84.0	743	88.4	22	71	0.86
78.1	1269	3.0	1170	318	4690	12.1	80.6 E	2287	5.6	650	85.5	880	89.6	24	87	1.76
80.1	2049	5.0	860	412	4260	14.2	82.6 E	3434	8.5	510	86.6	981	90.6	25	99	2.49
81.0	2438	6.0	770	480	3910	15.0	83.5 E	3945	9.7	480	87.1	1021	91.0	25	103	2.80

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

SUMMARY DATA FOR POTENTIAL UPSTREAM RESERVOIR SITES

STUDY AREA- TAUNTON RIVER SUBWATERSHED-COLE RIVER

BENEFICIAL POOL							EMERGENCY SPILLWAY				DESIGN HIGH WATER		DAM			SAFE YIELD AT 95
ELEV (MSL)	STORAGE AC FT	IN	COST PER AC FT ($)	AREA (AC)	COST/ SURF AC ($)	DEPTH AT DAM (FT)	CREST ELEV (MSL)	TYPE	STORAGE AT CREST AC FT	IN	COST PER AC FT ($)	ELEV (MSL)	AREA (AC)	TOP ELEV (MSL)	HGT FT	FILL VOL (1000 CY)	PERCENT CHANCE (MGD)
SITE-NB-7208 DA= 0.69 SQ MI = 442 AC USGS QUAD-SOMERSET LATITUDE 41-47-28 LONGITUDE 71-09-02																	
SITE RATING (1) STREAM WATER QUALITY (B) 100-YR PRIN SPWY DESIGN STORM RUNOFF = 5.60 IN, PEAK FLOW = 221 CFS																	
102.3	0	0.0		4		2.3	112.1	E	153	4.1	2440	115.3	64	119.0	19	31	*****
110.6	100	2.7	4630	23	19690	10.7	113.1	E	192	5.1	2410	116.6	75	119.8	20	35	0.14
111.6	126	3.4	3960	32	15530	11.7	114.1	E	240	6.5	2080	117.1	80	120.3	20	37	0.17
113.0	179	4.9	3090	44	12660	13.0	115.5	E	319	8.7	1730	118.0	87	121.1	21	40	0.21
114.1	231	6.3	2570	53	11210	14.1	116.6	E	398	10.8	1500	118.6	93	121.8	22	42	0.26
114.6	258	7.0	2390	57	10750	14.6	117.1	E	434	11.8	1420	119.0	95	122.1	22	44	0.28

NOTES - (1) COSTS ARE BASED ON 1972 S.C.S. DESIGN CRITERIA AND COST DATA.
(2) EMERGENCY SPILLWAY STORAGE AND COSTS ARE BASED ON TOTAL STORAGE, INCLUDING BENEFICIAL POOL.
(3) EMERGENCY SPILLWAY TYPE CODE- C=CONCRETE CHUTE, D=CONCRETE DROP, E=EXCAVATED, T= TWO SPILLWAYS, N= NONE
(4) TABULAR DATA ARE BASED ON PRELIMINARY INFORMATION. FIGURES SHOWN ARE PRIMARILY FOR COMPARISON PURPOSES.
(5) ELEVATIONS ARE SHOWN TO THE NEAREST 0.1 FOOT TO SHOW VARIATION BETWEEN DEVELOPMENTS ONLY, AND ARE NOT TO BE CONSIDERED ACCURATE TO THAT DEGREE.

** DO NOT USE FOR FINAL SITE SELECTION OR LAND ACQUISITION. **

EXISTING SITE NB-7209
(Somerset Reservoir)

Location: On Labor In Vain Brook about 1,300 feet upstream from County Street, Route 138, in Somerset, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°46'37" Longitude: 71°08'21"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
165	40	970	1.5

Potential for Expansion: Inflow is supplemented by pumping from the Segreganset River. Expansion would depend on the ability to pump additional water.

Remarks: The dam is an earth fill structure with a concrete core. The upstream slope is riprapped. The spillway is a gated structure used to provide water to the Somerset Filtration Plant. The yield from the drainage area is supplemented by pumping from the Segreganset River.

Ownership and Use: The site is owned by the Town of Somerset and is used as a water supply reservoir.

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EXISTING SITE NB-7212
(Warren Reservoir)

Location: On the Kickamuit River about 1,000 feet upstream from Interstate Route 195 in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°45'55" Longitude: 71°13'53"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
80	13	600	0.9

Potential for Expansion: It appears that expansion would depend on the ability to pump additional water to the reservoir.

Remarks: The dam is an earth fill structure. The upstream slope is riprapped. The spillway is a broad-crested concrete weir. Small trees are growing on the dam. The spillway sidewall has been partially undercut.

Ownership and Use: The site is owned by Bristol and Warren Water Works and is used as a water supply reservoir.

****

EXISTING SITE NB-7213

Location: On the Cole River about 1,000 feet upstream from Wood Street in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°45'58" Longitude: 71°12'54"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
13	10	6550	10.2

Potential for Expansion: It appears that the pool area could be greatly increased. A much longer dam would be required. A street and several houses would be affected.

Remarks: The dam is an earth fill structure. The principal spillway is a stone masonry drop structure. There is also a concrete drop structure with flashboards. Walls of the concrete drop structure are cracked and leak.

Ownership and Use: The site is owned by Richard Midwood and is used for recreation.

****

EXISTING SITE NB-7214 (Milford Pond)

Location: On the Cole River about 500 feet upstream from Milford Road in Swansea, Mass.

Somerset, Mass. USGS quadrangle

Latitude: 41°45'04" Longitude: 71°12'26"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
30	20	7450	11.6

Potential for Expansion: Significant expansion does not appear practical. A housing development is located along the western side of the pond.

Remarks: The dam is a crescent-shaped stone masonry drop structure. There is also a small concrete drop structure with flashboards and an inoperable concrete drop structure.

Ownership and Use: The site is owned by Montaup Electric and is used to store water for plant use.

****

EXISTING SITE NB-7215

Location: On the Cole River about 400 feet upstream from Route 6 in Swansea, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°44'50" Longitude: 71°12'12"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
9	10	7700	12.0

Potential for Expansion: Significant expansion does not appear practical. Milford Pond located about 1,500 feet upstream would be affected along with houses which line the western side of Milford Pond.

Remarks: The dam is a concrete drop structure with provision for flash-boards. There is also a fish ladder at the site.

Ownership and Use: The site is owned by Montaup Electric and is used to store water for plant use.

****

EXISTING SITE NB-7216

Location: On Lewin Brook about 200 feet upstream from Main Street in Swansea, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°44'58" Longitude: 71°11'43"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
12	12	1850	2.9

Potential for Expansion: Significant expansion does not appear practical. The High School is located on the left abutment.

Remarks: The dam is a stone masonry drop structure.

Ownership and Use: The site is owned by Montaup Electric and is used to store water for plant use.

****

EXISTING SITE NB-7217

Location: On Lewin Brook at the mill about 900 feet north of the intersection of Route 6 and Gardners Neck Road in Swansea, Mass.

Fall River, Mass. USGS quadrangle

Latitude: 41°44'43" Longitude: 71°11'34"

Surface Area (Acres)	Height of Dam (Ft.)	Drainage Area (Acres)	Drainage Area (Sq. Mi.)
6	15	1950	3.0

Potential for Expansion: Significant expansion does not appear practical. The pond is surrounded by streets and houses.

Remarks: The dam is a concrete gravity section with mechanically operated stop logs set atop the concrete crest. There is also an oval-shaped concrete drop structure emergency spillway.

Ownership and Use: The site is owned by Montaup Electric and is used to store water for plant use.

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NB-7209
Somerset Reservoir

NB-7215

NB-7213

NB-7216

EXISTING RESERVOIRS
SUBWATERSHED NB-72
COLE RIVER

LOCATION MAP

LEGEND

- SUBWATERSHED BOUNDARY
- DRAINAGE AREA ABOVE STRUCTURE
- POTENTIAL SITE SHOWING BENEFICIAL POOL FOR LARGEST STRUCTURE
- EXISTING POND OR RESERVOIR

7207
7206
7213
7212
7214
7205
7208
7209
7204
7201
7216
7217
7215
7202

SOURCE: USGS QUAD SHEETS
FALL RIVER-1967
SOMERSET-1967
BRISTOL-1955
EAST PROVIDENCE-1949

COLE RIVER (NB-72)

NARRAGANSETT BAY STUDY AREA

MASSACHUSETTS

EXISTING AND POTENTIAL RESERVOIR SITES

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

USDA-SCS-HYATTSVILLE, MD. 1973

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

City or Town	Site No.	Narrative Information Page	Design Summary Page
Abington	4802	24,29	27
	4806	30	-
	4901	37	-
Attleboro	5508	101	107
	5525	115	-
	6001	152	157
	6003	152	157
	6004	153	157
	6008	153	158
	6010	155	158
	6011	155	159
	6020	163	-
	6022	165	-
	6023	165	-
	6024	166	-
	6027	168	-
	6028	168	-
	6029	169	-
	6030	170	-
Avon	4807	31	-
	4808	31	-
Berkley	5704	127	131
Bridgewater	4718	21	-
	4908	41	-
	5101	55	58
	5102	56	58
	5103	56	58
	5104	59	-
	5106	60	-
	5107	60	-
Brockton	4714	19	-
	4804	25,29	27
	4808	31	-
	4809	32	-
	4810	32	-
	4811	33	-
	4812	34	-
	4813	34	-

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

City or Town	Site No.	Narrative Information Page	Design Summary Page
Fall River	5806	136	139
	7101	171	-
	7103	173	-
	7104	173	-
	7105	173	-
Foxborough	5408	91	-
	5501	97	105
	5506	100	106
	5507	100	106
	5509	102	107
	5511	102	107
	5512	109	-
	5513	110	-
	5518	111	-
	5519	112	-
	5529	117	-
	5530	117	-
	5531	118	-
	5532	118	-
	5533	119	-
Freetown	5307	75	77
	5308	78	-
	5309	78	-
	5310	79	-
	5802	133	138
	5803	134	138
	5804	135	138
	5805	135	139
	5806	136	139
	5807	136	139
	5810	141	-
	5811	141	-
	5812	142	-
Halifax	4904	39	-
	4905	39	-
	4906	40	-
	4907	41	-
	4908	41	-
	4909	42	-
	4913	44	-
	5005	49	-
	5006	49	-

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

City or Town	Site No.	Narrative Information Page	Design Summary Page
Hanson	4903	38	-
	4911	43	-
	4912	43	-
	4913	44	-
	4914	44	-
Lakeville	5218	71	-
	5313	80	-
	5314	81	-
	5315	81	-
	5316	82	-
	5317	82	-
	5809	137	140
	5813	142	-
Mansfield	5406	87	90
	5407	88	90
	5409	91	-
	5516	103	108
	5517	103,111	108
	5520	112	-
	5521	113	-
	5522	113	-
	5534	119	-
Middleborough	5004	46	48
	5009	51	-
	5201	61	65
	5219	72	-
	5301	73	76
	5303	74	76
	5306	74	76
	5309	78	-
	5311	79	-
	5312	80	-
	5317	82	-
	5318	83	-
	5319	83	-
North Attleborough	6009	154	158
	6012	156	-
	6016	161	-
	6017	162	-

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

City or Town	Site No.	Narrative Information Page	Design Summary Page
Rehoboth (continued)	5908	145	148
	5909	146	148
	5910	149	-
	5911	149	-
	5912	150	-
Seekonk	6025	167	-
Sharon	4719	22	-
	5401	85	89
	5411	92	-
	5412	92	-
	5502	98	105
	5503	99	105
	5507	109	-
Somerset	7201	175	180
	7208	179	182
	7209	183	-
Stoughton	4705	11	14
Swansea	7202	176	180
	7204	176	180
	7205	177	181
	7206	178	181
	7207	178	181
	7212	183	-
	7213	184	-
	7214	184	-
	7215	185	-
	7216	185	-
	7217	186	-
Taunton	5202	62,67	65
	5206	67	-
	5210	68	-
	5211	68	-
	5212	69	-
	5220	72	-
	5416	94	-
	5417	95	-

MUNICIPAL INDEX OF RESERVOIR SITE INFORMATION

City or Town	Site No.	Narrative Information Page	Design Summary Page
Taunton (continued)	5418	95	-
	5605	123	-
	5606	124	-
	5705	128	131
	5706	129	131
	5707	132	-
West Bridgewater	4706	12,15	14
	4716	20	-
Westport	7102	172	-
	7103	172	-
Whitman	4902	38	-
Wrenthan	5515	103	108
	5527	116	-

APPENDIX

This report is one of a series dealing with reservoir sites. Previous reports in the series are:

1. Study of Possible Water Storage Areas, Ipswich River Watershed, January 14, 1965.

2. Study of Possible Water Storage Sites, Upper Hoosic River and Upper Housatonic River, February 1966.

3. A Study of Potential Reservoir Sites in Massachusetts, Hudson River Basin, January 1968.

4. A Study of Potential Reservoir Sites, Housatonic Study Area, Massachusetts, June 1969.

5. Inventory of Potential and Existing Reservoir Sites, Merrimack Study Area, Massachusetts, March 1970.

6. Inventory of Potential Reservoir Sites, Neponset Study Area, Massachusetts, October 1970.

7. Inventory of Potential and Existing Upstream Reservoir Sites, Thames Study Area, Massachusetts, January 1971.

8. Inventory of Potential and Existing Upstream Reservoir Sites, Parker and North Shore Study Area, Massachusetts, June 1971.

9. Inventory of Potential and Existing Upstream Reservoir Sites, Nashua Study Area, Massachusetts, March 1972.

10. Inventory of Potential and Existing Upstream Reservoir Sites, Deerfield Study Area, Massachusetts, November 1972.

11. Inventory of Potential and Existing Upstream Reservoir Sites, Chicopee Study Area, Massachusetts, May 1973.

Reservoir site studies are now in progress for the Millers, Ipswich, South Shore, and Cape Cod Study Areas.

Reports will be prepared in future years for the remainder of the state. Basic data from which this report was prepared are on file in the Soil Conservation Service Office, 29 Cottage Street, Amherst, Massachusetts 01002.

RIVER BASIN STUDY AREAS

LEGEND

——— Study Area Boundary
—4— Watershed Boundary and Number

MASSACHUSETTS WATER RESOURCES STUDY

MASSACHUSETTS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE